ELEMENTS OF RATIONAL AND EMOTIONAL APPEAL IN MAGAZINE ADVERTISEMENTS: A SOCIAL COGNITIVE APPROACH

A Thesis

by

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ABSTRACT

This content analysis analyzed the use of advertising appeals—creative techniques used to communicate messages about products and services in such ways as to initiate purchase behavior—in tractor advertising appearing in *Successful Farming* magazine from January 2004 to December 2013. Using social cognitive theory and the consumer buying decision process model as guides, the study aimed to answer the research question: Are the appeals used in tractor advertising rational, emotional, or undeterminable? Two industry experts independently examined each advertisement in a sample of advertisements (n = 30) randomly assigned to each expert coder; the researcher examined all advertisements in the population (N = 66). All coders followed the same implicit set of coding instructions developed to determine if the predominant appeal in each advertisement in the sample/population was rational, emotional, or undeterminable. Inter-rater reliability was established using Krippendorff's α. The results of the content analysis determined 70% of the advertisements appearing in *Successful Farming* magazine from January 2004 to December 2013 used predominantly rational appeals. In 30% of the advertisements, the coding team was unable to determine if the advertisement used rational or emotional appeals. None of the advertisements in the study used predominantly emotional appeals. This research lays the foundation for future study of advertising appeals used in agricultural advertising.

DEDICATION

I would like to dedicate this work to my parents Dick and Catherine Costello, and Mark and Rita Supernaw. It is because of their endless love, support, and encouragement that I've always had the courage to follow my dreams.

ACKNOWLEDGEMENTS

I would like to extend my heartfelt gratitude to my committee chair Dr. Billy McKim. He encouraged me to take a leap of faith and pursue a new career, which is something I thought I'd never do. It has been the best thing I've ever done. The research road has been paved with frustration, and it was difficult accepting I didn't have all of the answers. Dr. McKim reassured me the answers were out there; I just had to find them. Because he told me to dig deeper to get what I needed, I have become a much stronger researcher because of it. If it were not for him recognizing *something* in me, I would not have accepted one of the greatest challenges of my life. It was an honor to be guided through the research process by someone with a true passion for the discipline.

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In addition, this research would not have been possible without the help my advertising coding team. Tom Flynn and David King generously provided their communications and advertising expertise to help me establish the inter-rater reliability of the study. I would also like to thank Curt Blades and his team at *Successful Farming* magazine for providing electronic files of the advertisements used in this study. I deeply

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Additionally, I'm grateful for the Agricultural Leadership, Education, and Communications department faculty and staff who have made my time at Texas A&M University a great experience. Also, I'd like to give special thanks to Dr. Deborah Dunsford, Dr. Holli Leggette, and Dr. Tobin Redwine for their understanding and coaching as I worked to balance completing my thesis and my teaching assistantship responsibilities.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Consumers use the information found in magazines as a primary resource for information about products and services, and consumers are more receptive to magazine advertising than advertising from competitive mediums (e.g., radio, television; Belch & Belch, 2009). Farmers and ranchers—defined by the Bureau of Labor Statistics as agricultural managers operating businesses to produce crops, livestock, and dairy products (Bureau, 2014)—are consumers of products and services necessary to operate their businesses, and use magazines to learn about new agricultural products, equipment, services, and suppliers (Agri Council, 2014). However, little current academic research existed about using printed advertisements in agricultural publications to influence farmers' and ranchers' decision to purchase or not to purchase particular brands of agricultural products and services. The purpose of this study was to create a foundation from which to investigate how printed advertisements influence farmer and rancher purchase behavior.

In this chapter, the definition of advertising and how advertising relates to printed forms of media was presented. The chapter also contains a description of the advertising business process—the ways in which manufacturers work with advertising agencies to create advertising messages for a farmer and rancher audience. The most frequently used advertising appeals, and how the appeals are used to connect consumers' needs to a

brand, were also addressed. Lastly, social cognitive theory, and how this theory informed the study, was explained.

Many definitions for the term *advertising* exist in the literature. For purposes of this study, advertising was defined as paid, non-personal, persuasive communication targeting an audience through mass media channels to promote a sponsoring organization's product, service, or idea (Arens & Bovee, 1994; Pride & Ferrell, 2012). Agricultural advertising is one type of business advertising used to promote agricultural products and services that may be of interest to farmers and ranchers, or others in agricultural businesses (Arens & Bovee, 1994). Agricultural advertising is also used by agricultural businesses to create a positive corporate image, build a strong corporate brand, generate sales leads, and reinforce consumer buying decisions (Belch & Belch, 2009). In addition, advertising can be used to differentiate products with similar functional attributes (Belch & Belch, 2009). Brand recognition, product differentiation, and sales are just a few of the reasons agricultural companies spend millions of dollars on advertising annually. For example, according to the Deere and Company 2013 annual report, advertising expenditures were $183 million in 2013, $177 million in 2012, and $163 million in 2011 (Deere and Company, 2013). These numbers included many advertising mediums, such as television, radio, electronic advertising on websites, and printed advertisements in newspapers and magazines. One reason advertisers choose to advertise products and services in magazines is due to selectivity—the ability to reach specific target markets with a high likelihood of purchasing the product advertised (Belch & Belch, 2009).

Magazines are important media vehicles, not only for advertisers, but also for consumers (Belch & Belch, 2009). Belch and Belch (2009) believed it was not uncommon for people to read a variety of weekly and monthly magazines to become better informed, or simply for pure enjoyment. Kantar Media SDRS (Standard Rate & Data Service), a company specializing in media research that industry media planners use as a periodical reference source, divided magazines into three broad categories: consumer, farm, and business (Belch & Belch, 2009). Kantar Media SDRS defined farm publications as magazines targeting farmers and ranchers, and their families (Belch & Belch, 2009).

According to Belch and Belch (2009), consumers engaged with magazines on a personal level, and considered advertisements valuable. However, the results of the *Perceptions of Ag [sic] Media* survey conducted by the American Agricultural Editor's Association indicated farmers and ranchers are reluctant to use advertising as a means to inform the purchase decision (2012). The survey required respondents to weigh in on a series of statements. Of the men and women ages 18 to 35 who participated in the study, 51 indicated "agree" or "strongly agree" for the statement, "I rely on information from company advertisements to make decisions," and 201 respondents chose "disagree" or "strongly disagree" rankings for the same statement (2012). However, 267 young farmers and ranchers selected "agree" or "strongly agree" to the statement, "Ag magazines and newspapers are trusted sources of information," compared to 11 respondents who chose "disagree" or "strongly disagree" (2012).

To summarize, the young farmers and ranchers in this study indicated they trust the editorial content in magazines, but not the advertising messages, contradicting Belch and Belch's (2009) assertion that consumers consider advertising messages in magazines valuable. Similarly, the results of the *2014 Media Channel Study* conducted by the Agri Council reported only 6% of respondents in the study indicated using magazines to make the final decision about which brand to purchase (Agri Council, 2014). As noted previously, companies advertise in magazines because of selectivity, the publication's ability to reach a targeted audience of consumers, which are the consumers most likely to purchase the product, or take advantage of the service advertised (Belch & Belch, 2009). Thus, agricultural businesses advertising products and services in agricultural publications may question why there were not more respondents indicating using the content in magazines in the final buying decision, and whether advertising in magazines is the best investment. Because agricultural companies ultimately want to sell more products (Nelson, 1974), they are spending millions of dollars annually on printed advertising in agricultural magazines to do so. Therefore, agricultural companies need to know to what extent their advertising efforts in these publications are influencing sales (Arens & Bovee, 1992), and that their advertising efforts are not a wasted expenditure. Investing in the expertise of advertising agencies was one way agricultural companies ensure persuasive messages are getting out at the right time in the right place to the right target market.

Advertising Business Process

The advertising business process was useful to explain the relationship between the manufacturer and the advertising agency, and to explain the steps followed to create the printed advertising message. The advertising business process (Figure 1) was used in this study to explain how advertising messages are delivered to farmers and ranchers.

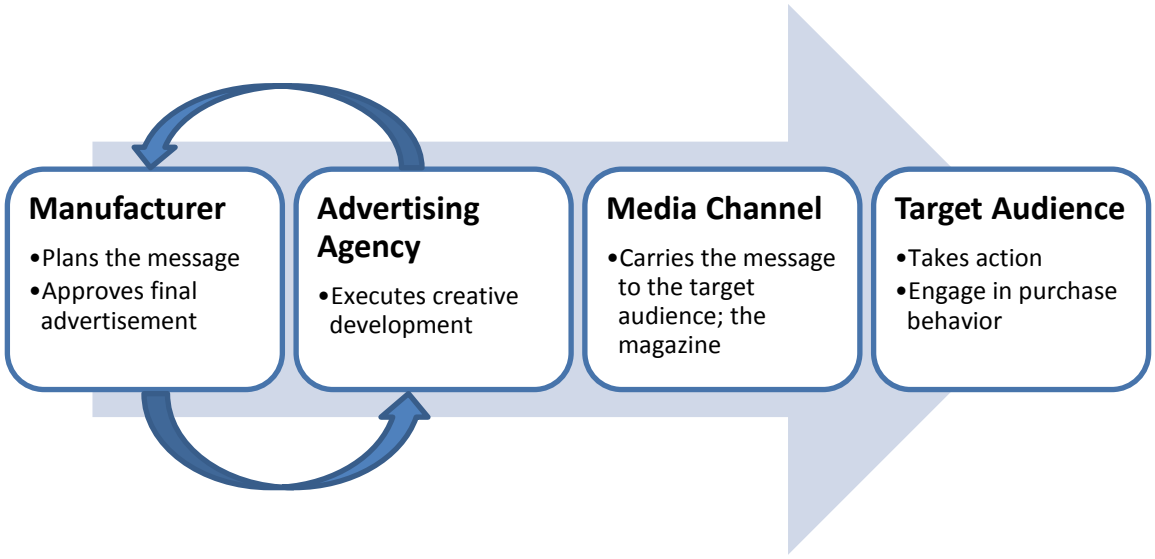

Figure 1: The advertising business process. The arrows represented the cyclical nature of the approval process.

In the first step of the advertising business process, manufacturers determined what features and benefits of the product or service needed to be communicated to the target audience. A representative of the company communicated the business goals and product attributes to the advertising agency (Pride & Ferrell, 2012). The advertising agency's team is comprised of qualified individuals with expertise in a wide range of

services advertisers needed, including account management, copywriting, graphic design, editing, media placement, and print production (Arens & Bovee, 1992). Creation of the tangible printed advertisement itself specifically included copywriting, artwork design, and print production. The resulting advertisement was a combination of words and pictures that depicted the product to prospective customers (Arens & Bovee, 1992). Therefore, the manufacturer and the advertising agency shared responsibility in the development of the advertisement (Pride & Ferrell, 2012).

The advertising agency presented the proposed advertisement to the manufacturer for approval. The manufacturer must approve the final advertisement before it is released to the media channel, and if the manufacture required changes to any element of the advertisement, the agency was responsible for the changes (Arens & Bovee, 1992). The approval process was ongoing until the advertising agency created an advertisement the manufacture found suitable; thus, the approval process continued until the manufacturer was satisfied, indicated by the arrows in Figure 1. Upon manufacturer approval, the advertisement was provided to the media channel, represented in this study by the agricultural magazine chosen to deliver the manufacturer's message to the target audience (Arens & Bovee, 1992). Once the farmer and rancher target audience received the message through the advertisement in the magazine, the farmer and rancher made the decision to either take action (e.g., seek more information, visit a sales location), or not to take action.

The decision to take action, or engage in purchase behavior, was the first step in the Consumer Buying Decision Process (CBDP; Belch & Belch, 2009; Pride & Ferrell,

2012). The CBDP outlined the stages a consumer goes through when presented with advertising messages.

Figure 2. The consumer buying decision process.

The first stage of the CBDP was problem recognition, which occurs when the awareness of a need is realized, or there is a change in consumers' state of being such that their desired state is different from their actual condition (Pride & Ferrell, 2012). Problem recognition may be immediate, or it can emerge over time; often, the consumer is unaware of a problem or need until advertising messages trigger recognition (Pride & Ferrell, 2012). Pride and Ferrell (2012) emphasized behavior is influenced by emotion; it is emotion that drives consumers to want to satisfy the problem or need. To satisfy the problem or need, consumers must enter the next stage of CBDP: information search. In an information search, consumers seek to acquire information about products or services. There are two types of information searches: internal and external. In an internal search,

consumers recall information about products to solve their problem; in an external search, consumers seek information from outside sources, including friends and family members, salespeople, the Internet, and traditional and social media outlets (e.g., magazines, newspapers, Facebook, Twitter). A successfully completed information search leads to an evaluation of alternatives, the next step in the CBDP. In this stage, consumers create a consideration set—a group of products or brands that could satisfy their need or solve their problem. Ideally, manufacturers want their products to be part of this set. In the last two stages, purchase and postpurchase evaluation, consumers purchase the product from the consideration set that best fits their needs, and after using it, evaluate it based on the product's ability to meet their performance expectations (Pride & Ferrell, 2012).

Because advertising can trigger problem recognition, problem recognition was identified as an important area of interest of this study. To examine the problem recognition construct as it related to magazine advertisements, it was necessary to select an appropriate farm publication from which to draw examples of agricultural advertising for analysis. There were many farm publications created for farmers, their families, or for agricultural dealers, retailers, and manufacturers—those entities that sell agricultural equipment, supplies, and services (Belch & Belch, 2009). According to Walter (1995), *Successful Farming* magazine and *Farm Journal* magazine were the two largest national-circulation general farming magazines in the United States with a rich tradition in agricultural print media. Farm Journal Media was founded in 1877, and *Farm Journal* magazine's circulation exceeded 360,000 subscribers (agweb.com/farm_journal_media,

2014). *Successful Farming* magazine, established in 1902, reached 420,000 agriculture enthusiasts nationwide (http://www.meredithagrimedia.com/media-kits/successful-farming, 2014). Both *Farm Journal* magazine and *Successful Farming* magazine contained articles about many types of farming practices to appeal to diverse agricultural interests, and belonged to the general interest agricultural publications category (Belch & Belch, 2009). However, *Successful Farming* magazine was chosen as the media channel to use in this examination because it had the larger circulation. Additionally, *Successful Farming* magazine provided a portable document format (PDF) of each individual tractor advertisement examined in this study.

Similarly, there was a broad range of agricultural products advertised in *Successful Farming* magazine, so broad it was necessary to choose just one category of focus for this study. Many agricultural product categories were considered, including farm machinery, seed, chemicals, and financial services. Farm machinery was chosen because of the functional necessity to all types of agriculture (Drake, 2014), but all types of farm machinery was also too broad in scope for this study. Therefore, consideration of the different types of farming practices (e.g., row cropping, livestock management) helped to identify the different types of farm machinery: tractors, combines, planting and application equipment, harvesters, tillage equipment, irrigation systems, and precision farming tools. Of the many types of farm machinery, tractors were selected as the appropriate farm machinery for analysis in this study for several reasons. First, no matter the type or size of farming or ranching operation, a tractor was necessary equipment, and needed to operate other types of farm machinery (e.g., planting and application

equipment). Second, the tractor market was determined to be highly competitive; the International Trade Administration reported the market for low-to-medium horse-power (HP) agricultural tractors (up to 275 HP) was particularly competitive (Sweeney, 2009). Lastly, the market for tractors has varied over the years. For example, 2004 tractor sales reached nearly 300,000, but steadily declined every year thereafter, barely exceeding 155,000 in 2009 (Carson, 2014). Since 2009, tractor sales have been on the rise again (Carson, 2014), which made tractors a logical choice for this study. In addition, the recent trends in tractor sales influenced the decision to limit the study to advertisements appearing in *Successful Farming* magazine from 2004 to 2013

Studying the way printed advertising in *Successful Farming* magazine influenced a farmer or rancher to begin the CBDP had implications for agricultural businesses and the agencies employed to create the advertising platform for the product advertised. Vakratsas and Ambler (1999) asserted advertisers do not control consumer motives, but they do control the advertising message development, and choice of advertising appeal used to get a consumer to recognize a problem and become motivated enough to solve it. Similarly, it is also the task of manufacturers to understand how advertising influences farmers and ranchers as consumers of agricultural products and services (Vakratsas & Ambler, 1999). An understanding of how the advertising appeal has influence on the initiation of the problem recognition phase of the CBDP would also help businesses channel their advertising efforts more effectively, whether the goal is to sell products (Abraham & Lodish, 1989; Lodish et al., 1995), or create brand awareness. Therefore, evaluating the different appeals used in tractor advertising was necessary.

Advertising Appeal

The appeal was the center of the advertising creative; it was what connected the brand to the consumers' needs and desires: "The appeal is the sticky glue that hooks the reader or viewer to the advertising message" (Dix & Marchegiani, 2013, p. 393). According to Orwig (2004), rational appeals and emotional appeals were the two categories of advertising appeals used most frequently by advertising professionals. Rational appeals frame the product or service by listing product benefits, providing convincing proof that the information is truthful and demonstrable, and are often used when promoting products or services that could contribute considerably to the financial success of an individual or business (Orwig, 2004).) Rational appeals are ones that convey value, economy, popularity, convenience, health, performance, durability, or emphasize the functional value of the brand (Dix and Marchegiani, 2013). Emotional appeals, such as humor, sex, guilt, nostalgia, pride, joy, or security, create feelings about the brand message. Emotional appeals in advertising messages persuade by arousing feelings or reactions, or stimulating psychological, social or emotional needs (McKay-Nesbitt, Manchanda, Smith, & Huhmann, 2011). Emotional appeals can be positive (e.g., joy, warmth, happiness) or negative (e.g., fear, guilt, worry).

Bowen and Chaffee (1974) proposed an advertisement's impact was determined by the consumer's desire for the product, the appeal made on its behalf and the product itself. According to Fowles (1982), most advertisements in national publications had two basic characteristics: (a) the inclusion of information about the product (who

manufactured it, what it looked like, what it does) and (b) creative appeals used to trigger inherent drives within consumers that make them consciously or unconsciously want to possess the product in the advertisement. Emotional appeal in agricultural advertisements may influence behavior (Pride & Ferrell, 2012), but it is unclear whether advertising agencies used emotional appeals in agricultural advertising. Similarly, even if the advertising agencies presented advertisers with advertising messages using emotional appeal, it was unclear if advertisers accepted emotional appeals.

Therefore, the following research question was posed: Are tractor advertisements in *Successful Farming* magazine using rational or emotional advertising appeals?

To answer the research question, a model to help describe media behavior was needed. According to LaRose and Eastin (2004), social cognitive theory (SCT; Bandura, 1986) has been widely used as a framework for media studies, and because media usage is open media consumption behavior, the behavior is determined from the expected outcomes that follow consumption. SCT has been used in media research to explain both intentional (positive) and unintentional (negative) media effects (Nabi & Oliver, 2009).

Social Cognitive Theory

The roots of traditional social learning theories dated back to 1963; however, Bandura modified his existing social learning theory, and advanced SCT in 1986. SCT was different from previous social learning theories because it emphasized the role cognition—activities in the brain influencing thoughts and actions—played in how people created meaning from information, and chose to act or not act based on their

personal encoding of the message, and the environment in which the information was received (Bandura, 2001b). According to the SCT, a consumer's decision to take action was based on the relationship between three basic determinants: personal, behavioral, and environmental. Bandura (1989) called this phenomena reciprocal determinism; personal determinants, behavioral determinants, and environmental determinants were domains that interact with each other in ongoing ways that created influence. Personal determinants—character, expectations, values, self-awareness, and life goals—gave form and direction to behavior (those actions taken as a result of some kind of personal need or environmental stimulus). What individuals think, believe, and feel, have emotional impact on how they behaved (Bandura, 1989).

The connection between personal characteristics and the environment was another dynamic in reciprocal determinism. Cognitive capabilities are developed and modified by social stimuli that express information and activate emotional reactions through modeling, teaching, and social persuasion (Bandura, 1989). Further, the relationship between the environmental and behavioral domains explained the influence that an individual's surroundings, situation, or experience has on his or her actions (Bandura, 1989). The cognitive, environmental, and behavioral domains are constantly influencing each other, but there are times when one domain may display more influence, which allowed different stimuli to influence thought, expression of emotion, and behavior (Young, Lipowski, and Cline, 2005). Bandura's (2001a) conceptual model included in Figure 3 helped to visualize the reciprocal interaction among conceptual elements of SCT.

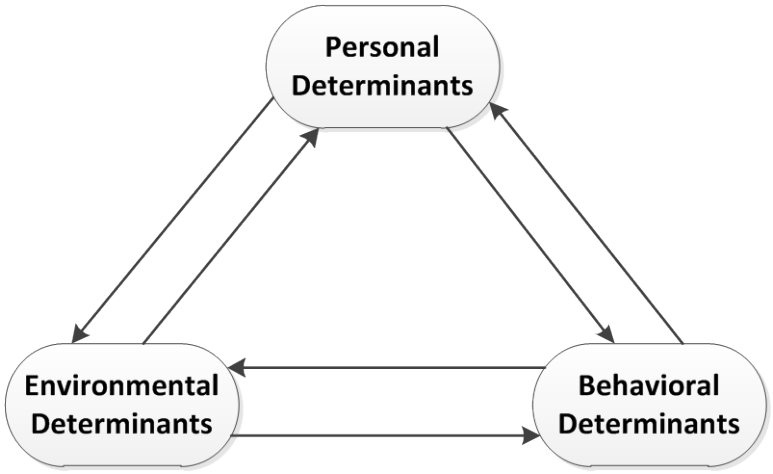

Figure 3. Social cognitive theory. The arrows going in both directions from each determinant indicated reciprocal relationships.

SCT was a leading theory in understanding the ways in which media effects behavior; Nambi and Oliver (2009) recommended media researchers use SCT because the theory was rich, yet flexible. For example, Harrison and Cantor (1997) used SCT in an examination of the relationship between media use and psychological factors that may contribute to female eating disorder behavior. The exposure variables used in the study included quantity of media use operationally defined as hours of programming viewed and the number of issues read, and content of media use, which was assessed by the television shows viewed and the magazine genres read. Television content was categorized according to the body type of the main characters; magazine content was categorized according to the degree of the magazines' emphasis on thinness and fitness (Harrison & Cantor, 1997). Similarly, LaRose and Eastin (2004) used SCT to guide a study of the empirical relationship between media gratifications and media usage. The

researchers obtained a sample of Midwestern adult Internet users and asked them to complete an online survey. The results confirmed the uses and gratifications paradigm, and extended it to a theory of media attendance grounded in SCT. Further, by instituting new operational measures of expected gratifications, the researchers established it was possible to predict high degrees of media consumption (LaRose & Eastin, 2004). These studies are just two examples of how SCT has been a useful framework for media studies, regardless of the medium. Therefore, SCT was a logical model to use for this study of rational and emotional advertising appeals in tractor adverting appearing in *Successful Farming* magazine.

Following the SCT model, the personal determinant was conceptualized in this study as the complex cognitive processes farmers' or ranchers' used to perceive rational or emotional advertising appeals. Similarly, the behavioral determinant was conceptualized as activation of the problem recognition stage of the CBDP, and the action or inaction taken as a result of problem recognition, and the environmental determinant was conceptualized as the tractor advertisements in *Successful Farming* magazine. Therefore, describing the elements of rational or emotional appeal in tractor advertisements appearing in *Successful Farming* magazine will better enable subsequent studies to investigate and consider the effect of rational or emotional appeal in agricultural advertising in farm publications. Figure 4 illustrated the reciprocal interaction among conceptual elements related to this study.

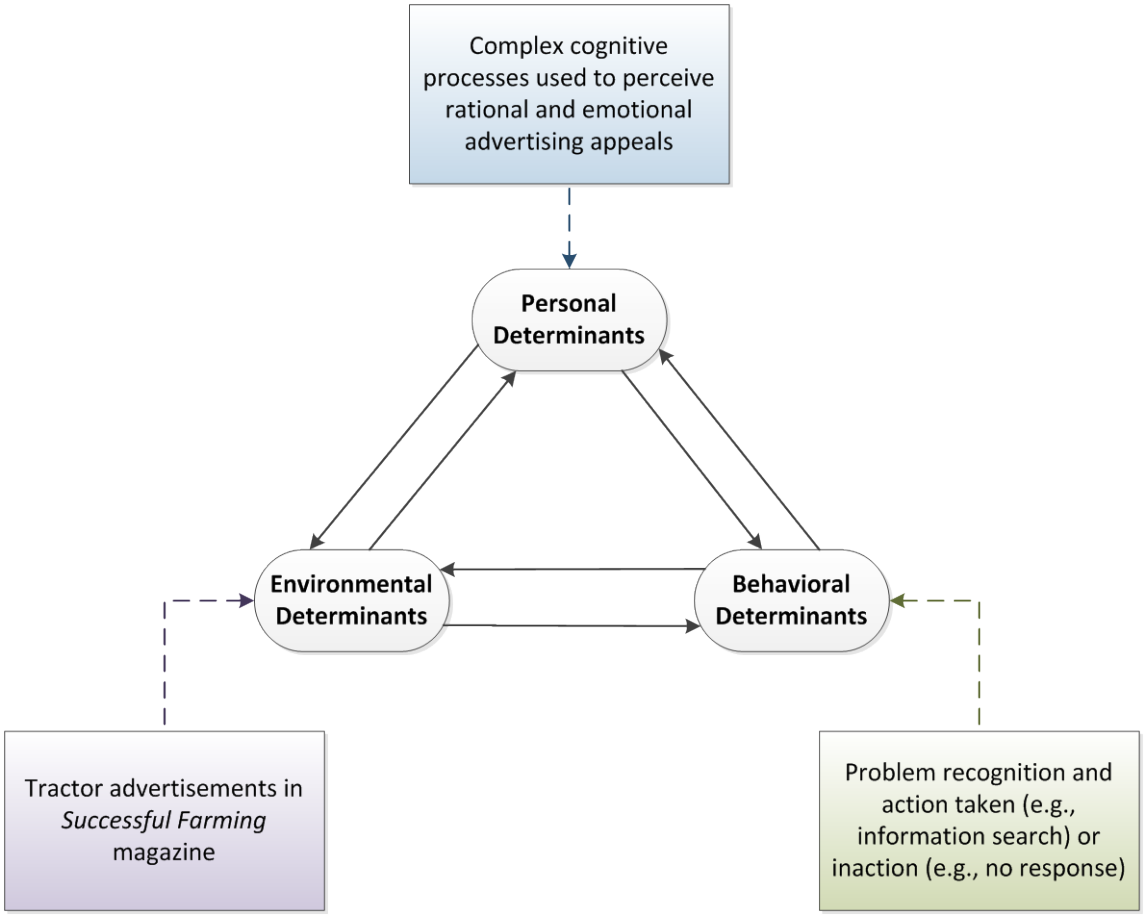

Figure 4. Reciprocal interaction among conceptual elements. SCT and CBDP guided the design and analyses by assigning factors associated with each determinant—personal, environmental, and behavioral.

CHAPTER II

METHOD

Definitions of the different advertising elements examined in this study are provided in this chapter, as well as the rationale for the decision to examine tractor advertising appearing in *Successful Farming* magazine. Content analysis, and its rich history of use in media studies, is also explained. Further, development of the instrument, including the importance of establishing validity and reliability, is presented. This chapter will conclude with an explanation of the ways in which the data was collected, analyzed, and interpreted.

Social cognitive theory and the consumer buying decision process were used in combination to create the conceptual framework for this descriptive study of the advertising appeals appearing in printed advertisements published in *Successful Farming* magazine. The complex cognitive processes farmers and ranchers used to perceive rational and emotional advertising appeals in the advertisements in *Successful Farming* magazine represented the SCT personal determinants domain. The SCT behavioral domain was represented by farmers' and ranchers' problem recognition, which occurs when the awareness of a need is realized (the first step in the CBDP), and action taken. In other words, if the appeals used in the advertisements are predominantly emotional, the farmers' reaction to the stimulus would be the problem recognition stage of the CBDP. The SCT environment domain was the tractor advertisements in *Successful Farming* magazine.). Two explanations of the creative elements that comprise an advertisement were examined to inform this study.

The first set of explanations examined identified the prominent elements of an advertisement as header, image, body, call to action, and contact information (Pearson, 2010). Each component is defined in Table 1.

Table 1

Pearson definitions of advertising elements

Element	Definition
Header	The strongest element of the print advertisement used to intrigue the consumer so that the consumer will want to read the rest of the information in the advertisement.
Image	The graphic representation in the advertisement relevant to the product in the advertisement and/or the information contained within.
Body	The “meat” of the advertisement, providing additional information about and building interest in the product.
Call to Action	Verbiage used to create a sense of urgency in the consumer to acquire the product. This wording also directs the consumer about what to do next. Actions include visiting a retail outlet to purchase the product, contacting a sales representative for more information or visiting the manufacturer’s website.
Contact Information	The company’s name, address, phone number, and web address.

Similarly, Pride, and Ferrell (2012) identified the basic elements of a print advertisement as headline, body copy, sub-headline, signature, and illustration. Each component is summarized in Table 2.

Table 2

Pride and Ferrell definitions of advertising elements

Element	Definition
Headline	The first words that appear in the advertisement to catch readers' attention, creating enough interest in the product or service to make consumers want to read the entire advertisement.
Body Copy	All other wording in the advertisement that identifies a specific need or problem, and positions the product in the best way to provide a solution to the specific need or problem. Body copy also includes descriptions of product benefits, support for the advertising claims, and direction to the buyer on how to take action.
Sub-headline	Links the headline to the body copy; explains the headline.
Signature	Identifies the business sponsoring the advertisement, and contains the company's trademark, logo, name, and location.
Illustrations	Photographs, charts, graphs, tables, and graphic used enhance the advertisement, communicate an idea quickly, or convey difficult to express ideas or concepts.

Based on the similarity Pearson's (2010) list of advertising elements and Pride and Ferrell's (2012) list of the common elements found in print advertising, the elements

of examination in this study were categorized headline, body copy, artwork, call to action, and signature. The definitions from both Pearson (2010) and Pride and Ferrell (2012) were used to inform the final definitions in Table 3.

Table 3

Operational definitions of advertising elements

Element	Definition
Headline	The sentence in the advertisement that people read first, usually in larger font than the rest of the wording in the advertisement. The headline is written such a way as to draw attention to or entice consumers so that they will want to read the entire advertisement.
Body Copy	The verbiage in the advertisement that expands upon a specific idea or issue, communicates the benefits of the product in way that will satisfy the consumer's objectives for using the product, and supports any advertising claims made in the headline.
Artwork	The graphic(s) in the ad including photographs, illustrations, charts, graphs, and other images that are used to communicate an idea quickly or convey ideas and concepts that may be difficult to verbally communicate.
Call to Action	The verbiage that directs customers on what action to take if they need more information or want to purchase the product.
Signature	All information included in the advertisement that identifies the business sponsoring the advertisement.

Mass media has the power to influence people, and it is important to understand how "psychosocial mechanisms through which symbolic communication influences human thought, affect, and action" (Bandura, 2001a, p. 1). The personal determinant domain of SCT represented the complex cognitive process farmers and ranchers use to perceive rational and emotional appeals in tractor advertisements appearing in *Successful Farming* magazine. *Successful Farming* magazine was the chosen media for this examination because it has a larger circulation (420,000 subscribers) when compared to *Farm Journal* magazine (360,000 subscribers). Although there were many agricultural product categories worthy of examination (e.g., equipment, seed, and chemicals), tractors were selected for several reasons. According to a report from the Association of Equipment Manufacturers, more than 21 million tractors were sold in the United States from 2003 to 2013 (Carson, 2014). Likewise, the International Trade Administration reported the market for low-to-medium horse-power (HP) agricultural tractors (up to 275 HP) is particularly competitive (Sweeney, 2009), making tractors an ideal type of agricultural equipment for examination. In addition to intense competition for buyers, tractors were selected because of their functional necessity regardless of the type of farming or ranching operation (e.g., row cropping, specialty cropping, livestock management). Although 21 million tractors were sold during the past decade, the total number of tractors sold per year varied. For example, 2004 tractor sales reached nearly 300,000, but steadily declined every year thereafter, barely exceeding 155,000 in 2009 (Carson, 2014). Since 2009, tractor sale were on the rise again (Carson, 2014). Because of these trends, it was determined that the scope of the content analysis should span from

2004 to 2013 to capture the rise, fall, and rise again in tractor sales in the 10-year timeframe.

The behavioral component of SCT was represented by the problem recognition step of the CBDP, specifically the farmer's or rancher's decision whether to take action based on the influence of the advertising appeal in tractor advertising. Therefore, 120 issues of *Successful Farming* magazine published from January 2004 to December 2013 were examined, and each tractor advertisement found was noted. The magazine publication year, month, and issue number were recorded, as well as the location of the advertisement in the magazine, the sponsoring company, and the advertisement size. The list was provided to an intern of *Successful Farming* magazine, who located the correct magazine, scanned the advertisement, and provided a Portable Document File (PDF) of each advertisement on the list.

The perception of the advertising appeal itself, either rational or emotional, represented the third SCT domain in this study. Bandura (2001b) noted the personal level involves the people's ability to perceive phenomena, and purposefully use information and self-regulation to get what they want. Bandura asserted people consciously process information with the intention of using it to make decisions about taking or not taking action (Bandura, 2001b). People behaved in ways that bring satisfaction to their lives, and do not behave in ways that bring dissatisfaction (Bandura, 2001b). Therefore, when the perception of advertising appeals is achieved consciously, farmers and ranchers processed the information in advertising with the intention of making decisions that will lead to successful, satisfactory outcomes.

Content Analysis

To determine the proportion tractor advertisements in *Successful Farming* magazine that used primarily rational as opposed to emotional appeals, a systematic approach was needed. It was determined that advertisements could be coded using the content analysis method to quantify the proportion of rational versus emotional appeals in the words and images. Various studies of printed advertisements have been successful using content analysis, and the methods employed in those studies are described herein, and were used to inform this study of tractor advertising.

Walter (1995) conducted a content analysis of 236 magazine articles depicting farmers. The non-pictorial content of the articles were analyzed by two coders who focused on text, captions, and headlines to identify characteristics and characterizations ascribed by the magazines to the featured farmers and their operations (Walter, 1995). Walter (1995) set up the coding categories prior to coding, and inter-coder reliability was established through the duplicate coding that occurred when the two coders analyzed articles from two randomly selected years of the three publications—*Farm Journal* magazine, *Successful Farming* magazine, and *Prairie Farmer*—from which the articles were drawn.

Additionally, Martin-Biggers et al., (2013) used the content analysis method in a study of newspaper grocery store circulars. The purpose of their study was to describe the types of foods advertised by leading supermarkets in the United States, and compare the foods advertised to USDA My Plate recommendations. The coding of the store

circulars occurred in two phases. In the first phase, the data were coded to indicate the store and the circular; in the second phase of the study, the front page of the advertisement was analyzed to determine where certain content was placed (Martin-Biggers et al., 2013).

In a third example, Strickland, Finn, and Lambert (1982) used content analysis to study problematic content in alcohol advertising appearing in youth-oriented U.S. magazines. The study consisted of 640 unique advertisements that were analyzed according to three broad areas: themes and appeals, appearance of human models, and presentation techniques. Appeals were designated a priori through a review of relevant literature and assessed by two independent coders (Strickland et al., 1982). Because of the inclusion of appeals and presentation techniques, the methods of the content analysis in the alcohol advertising study served as a guide for the content analysis conducted in this study of tractor advertising

Content analysis was one of the most important research techniques in social science research, and was widely used for examining many forms of communication (Krippendorff, 1989). Content analysis provided flexibility to researchers because this method can be either quantitative or qualitative. The quantitative approach was chosen for this study because it provided a systematic, quantitative, replicable method for examining communication content (Kassarjian, 1977; Krippendorf, 1989; Naccarato & Neuendorf, 1998; Stemler, 2001). According to Kassarjian (1977), quantification was an important consideration when using content analysis in research; quantitative content analysis worked best in studies that required statistical analysis of the data to produce a

precise summary of the findings for purposes of analysis and interpretation. Fraenkel and Wallen (2009) noted content analysis provided a method for researchers to indirectly study human behavior, or in this study, the potential for behavior. Because of the track record for providing the framework in which to explore advertising (Kolbe & Burnett, 1991), content analysis was the most logical choice to analyze the data.

In selecting the coders, Krippendorff (2004) emphasized using coders with extensive knowledge of the phenomena under investigation. The challenge for content analysts is in providing the appropriate descriptions of coders' backgrounds so that other content analysts can choose coders with similar backgrounds to those in the original research (Krippendorff, 2004). Therefore, two individuals with relevant industry experience were asked to lend their expertise as coders. Tom Flynn III, president of Lessing-Flynn advertising agency in Des Moines, Iowa, had more than 20 years of experience in advertising copywriting and production management. Flynn's knowledge of agriculture, and expertise in business-to-business and business-to-consumer marketing for a number of agricultural clients, made him a strong choice as a coder for this study. Similarly, the second expert coder chosen for the study was David King, who is the director of sales and marketing for Salford Group, Inc., a manufacturer of tillage equipment (e.g., plows, discs, and cultivators) that require the use of a tractor to pull them through the field. King also had nearly two decades of experience in farm machinery marketing. Prior to his work at Salford Group, King served as the Marketing Manager at Ag Leader Technology, a manufacturer of precision farming equipment for tractors and combines.

Although content analyses have been used extensively in communication research, the method had three fundamental limitations (Krippendorff, 1989). First, content analysis (in the form proposed herein) was quantitative. Krippendorff (2004) emphasized studies of text required those examining the text detect unexpressed meaning by reading and interpreting the text in deeper, more meaningful ways; thus, using procedures qualitative in nature. Second, the study must be replicable. People are different and can interpret the criteria set forth in different ways, even if a researcher is explicit in the training and coding specifications (Krippendorf, 1989). The final limitation was scope. Krippendorf (1989) suggested that if the categories are obtained through the data itself (the advertising that is being evaluated), the results could not be generalized outside of the study. With the potential limitations in mind, the study was structured to reduce the potential for these limitations to affect the study, and those preventative measures were described in the establishing validity and reliability section of this document.

Development of the Instrument

An electronic coding instrument developed using Qualtrics© Online Survey Software was used to systematically present each individual advertisement to coders with questions that corresponded to each advertising element as defined in the theoretical framework. Items were generated to reflect rational and emotional advertising elements. *Successful Farming* magazine provided an electronic file of every unique tractor advertisement found in the magazine from January 2004 to December 2013.

Drawing on the explanation of emotions from the *Feelings Inventory* created by the Center for Nonviolent Communication, individual emotions were selected that were representative of both positive and negative emotions as noted in the literature without duplicating descriptors that appeared in multiple categories. Eight positive and eight negative emotions were selected, and three synonyms from the *Feelings Inventory* were provided as a guide. Individual coders were presented with a single advertisement and a single question for consideration. Coders were asked to respond to each question with yes or no to indicate their agreement with the statement as it related to the five elements (headline, body copy, artwork, call to action, and signature) in each advertisement.

Validity and Reliability

Face validity is an intuitive process that ensures the measure reflects the content of the concept in question (Bryman, 2012). Face validity is often established in content analysis research because of the ultimate need for common sense and shared consensus (Krippendorff, 2004). In this study, face validity was addressed according to Krippendorff's (2013) recommendation that coders be chosen based on possessing the appropriate cognitive abilities and professional backgrounds relevant to the study. Coders must be detail-oriented, knowledgeable of the subject matter, and have the skills required remain consist throughout the coding process. Based on these criteria, the first expert chosen for this study was Tom Flynn III, president of Lessing-Flynn advertising agency in Des Moines, Iowa. The second expert coder chosen for the study was David King, who is the director of sales and marketing for Salford Group, Inc. Both expert

coders chosen for this study have more than 20 years of industry experience in farm machinery marketing and advertising. The two expert coders in this study also helped to establish content validity, a measure of how appropriate the items seem to a set of reviewers who have knowledge of the subject matter (Bryman, 2012). Krippendorff (2013) defined content validity as, "the extent to which a psychological test captures all the features that define the concept that the test claims to measure" (p. 331). Further, content validity supported the instrument was constructed to be systematically thorough (Krippendorff, 2013). Just as the three domains of SCT are interconnected, the construction of the coding instrument (environment), the coders' familiarity with advertising principals (cognition), and the coders' ability to be thorough and systematic in the coding process (behavior) are interconnected, and determined the accuracy of the data reported. Similarly, understanding the interconnectedness of the three SCT domains, operationally defined in this study the cognitive processes the farmer or rancher used to perceive rational and emotional advertising appeals (cognition), problem recognition and action taken (behavior), and the tractor advertisements in *Successful Farming* magazine (environment), influenced how the researchers constructed thorough, systematic coding guidelines and trained the experts accordingly.

The last measure of validity this study addressed was construct validity. Construct validity is necessary to establish when hypotheses are gained from a theory that is relevant to the concept (Bryman, 2012). It was important to recognize construct validity in this study because reactions to advertising messages are defined as being either rational or emotional; these reactions are abstract and cannot be directly observed.

This required the perception of rational or emotional response be clearly defined, then measured and correlated with the proposed measure, and finally examined to determine if each correlation supported the theories of rational and emotional responses predicted (Krippendorff, 2004).

In addition to establishing validity, reliability in studies using content analysis must be established. The content analysis procedure, above all else, must be reliable; the steps and techniques used should be outlined accurately so other research professionals can reproduce the study, and achieve the same results at any point in time using the same data (Krippendorff, 2004). The ability to replicate the study is the most important form of reliability (Krippendorff, 2004). According to De Swert (2012), a variety of measures is presented in academic literature; therefore, three different internal consistency reliability measures were considered for this study.

First, Cronabach's α, an approach to estimating reliability involving estimating the correlation between two random sample groups drawn from the universe of items similar to those in the test, was considered (Cronbach, 1951). However, Cronbach's α is often used to establish internal reliability in cases of multiple measures (Carmines & Zeller, 1979), but the interpretation does not translate seamlessly to cases of multiple coders. For this reason, Cohen's κ was also considered.

Next, Cohen's κ, a coefficient of inter-rater agreement for nominal scales, was also considered. Cohen's κ was designed to estimate the degree of consensus between two evaluators in a content analysis study. The %-agreement figure is established according to the level of agreement that could be expected by chance alone based upon

the values of the marginal distributions (Cohen, 1960). According to Stemler (2004), every study that involves judges must establish some degree of inter-rater reliability in order to be valid. In other words, if a pair of judges is unequipped to rate items based on set criteria, then any future replication of the study will generate results that have no direct causal relationship (Stemler, 2004).

Lastly, consideration was given to Krippendorff's α. Applied in many content analyses, Krippendorff's α is a reliability coefficient developed to measure the consistency among observers, coders, judges, raters, annotators, or measuring instruments to facilitate drawing distinctions between unstructured phenomena, or assigning computable values to them (Krippendorff, 2013). This type of reliability is appropriate for this study because unlike other coefficients, Krippendorff's α is a generalization of multiple recognized reliability indicators. It allows researchers to judge a variety of data with the same reliability standard. It also can apply to any number of observers, categories, scale values, levels of measurement (nominal, ordinal, interval, ratio), or incomplete data. Krippendorff's α works for any sample size, and reliability can be established per individual variable if required. Unlike Cohen's κ, Krippendorff's α emerged more systematic, complete, and provided flexibility for future replication of this study. Therefore, Krippendorff's α was selected to estimate the reliability of the coding instrument used in this study.

Following the selection of Krippendorff's α to establish internal consistency, the reliability design was chosen. "Without information about the circumstances under which the data for reliability assessments have been generated, agreement measures

remain uninterpretable," (Krippendorff, 2004, p. 215). Krippendorff (2004) defined three types of reliability and levels of strength (weak, medium, strong) for each type of reliability that informed the methods chosen for this study. According to Krippendorff (2004), stability (the degree to which a process is unchanging over time), reproducibility (the degree to which a process can be replicated), and accuracy (the degree to which a process conforms to its specifications and yields what it was designed to yield).

Stability is measured by test-retest. The test-retest approach to estimating reliability involves administering a test or measure to a sample once, and re-administering the same test or measure at a later time to the same group to determine the strength of the relationship between variables (Bryman, 2012).

Reproducibility, or inter-rater reliability, is the ability to create the same results across coders, and is estimated by measuring the % of agreement between raters (Stemler, 2001). This technique is particularly rich and meaningful because of its reliance on coding and categorizing of the data. In content analysis, not only do all units of the analysis receive equal treatment whether or not they are entered at the beginning or the end of the analysis, but also that the process is objective—anyone who performs the analysis, no matter where or when, should achieve similar results (Krippendorff, 1989). "Demonstrating reproducibility requires reliability data that are obtained under test-test conditions; for example, two or more individuals, working independent of each other, apply the same recording instructions to the same units of analysis" (Krippendorff, 2004, p. 215).

Accuracy, also referred to as inter-observer consistency, is particularly important when subjective assessment is required (Bryman, 2012). Accuracy is established by obtaining the data under test-standard conditions; a test-standard condition is the implementation of a data-generating procedure in a new study compared to a tested procedure from an existing study (Krippendorff, 2004). Accuracy is considered the strongest of the three reliability test measures (Krippendorff, 2004). This study was considered accurate because the procedure for the content analysis was informed by a variety of previous studies.

Data Collection

The population used in this study included 66 unique tractor advertisements appearing in *Successful Farming* magazine from January 2004 to December 2013. Among the many different types of farm machinery that were considered for examination in this study, tractors were chosen because of the functional necessity tractors have in many different types of farming operations. Additionally, tractors were chosen for this study because the United States market for tractors had become highly competitive because of increasing demand for this equipment since 2009 (Carson, 2014). The issue dates of examination—January 2004 to December 2013—were chosen because these issues captured the rise, fall, and rise again of tractor sales in the last 10 years (Carson, 2014).

Additionally, *Successful Farming* magazine was chosen because the magazine is a general-interest farming publication with a high number of subscribers, and a

representative from the magazine provided a portable document format (PDF) of each unique tractor advertisement analyzed in the study. Any tractor advertisements provided by *Successful Farming* magazine that were greater than one full-page were excluded from the study because the double-page advertisements and multiple-page advertising inserts became illegible when uploaded into Qualtrics© Online Survey Software. Because the survey was delivered electronically, only advertisements that were legible in the instrument—those advertisements provided by *Successful Farming* magazine that were one full-page or smaller—were analyzed in this study. Additionally, there was one full-page tractor advertisement provided by *Successful Farming* magazine that was not included in the population due to researcher error.

A simple-random sample of 30 advertisements was drawn from the 66 advertisement population, and the sample was provided electronically to the two expert coders with extensive backgrounds in equipment manufacturing marketing communications. Krippendorff (2013) recommended that coders be chosen based on possessing the appropriate cognitive abilities and professional backgrounds relevant to the study is an important task because coders must be detail-oriented, knowledgeable of the subject matter, and have the skills required to maintain consistency throughout the coding process. Based on these criteria, the first expert chosen for this study was Tom Flynn III, president of Lessing-Flynn advertising agency in Des Moines, Iowa. The second expert coder chosen for the study was David King, who is the director of sales and marketing for Salford Group, Inc.

To ensure coders understood the coding procedure and to establish a similar, consistent approach, the training procedure was created. Individual, face-to-face training sessions with each of the coders were planned using Skype technology because the expert coders were out-of-state. However, due to the travel schedules of the expert coders, a face-to-face training using Skype technology was not possible. Therefore, an electronic training package was created to ensure each coder received the same level and type of training. The package included an audio coding training PowerPoint presentation. See Appendix A for the complete presentation. Also, an example advertisement marked to show the common location of the components in the advertising layout and operational definitions of the advertising components of interest (Table 3) indicated by way of a call-out in the sample advertisement was included. See Appendix B for the advertising elements example. A coding manual describing the study, explanation of the coders' responsibilities as part of the research study, a description of rational and emotional advertising appeals, step-by-step directions for how to code each advertisement in the sample, and an advertising elements example were also included as part of the training materials. See Appendix C for complete coding directions.

The study began with providing the electronic sample of tractor advertisements to the expert coders using Qualtrics Online Survey Software. The expert coders were instructed to listen to and view the audio training PowerPoint presentation, read the training package documents carefully, and to follow the instructions step-by-step to independently code each advertisement in the sample. Each advertisement in the 30 item

sample was displayed individually, and each coding question relating to the advertising element of interest (headline, body copy, artwork, call to action and signature) was displayed one at a time as the coder moved through the coding instrument to ensure each question was answered and not inadvertently skipped. Coders were instructed to indicate "yes" or "no" for each item in a series of questions regarding the headline in the advertisement, and whether or not it characterized a rational or an emotional advertising appeal based on the operational definitions provided in the training. Because feelings and emotions are considered to be subjective, examples of feelings that corresponded with the question were provided. The examples of feelings were informed using the *Feelings Inventory*© 2005 by Center for Nonviolent Communication (Center for Nonviolent Communication, 2005). See Appendix G for the complete *Feelings Inventory*. Next, coders were instructed to review the advertising body copy, and indicate "yes" or "no" to a series of questions that would indicate whether or not the body copy characterized a rational or an emotional advertising appeal based on the operational definitions provided in the training. The third construct of review was the artwork. A list of possible descriptions of the artwork was posed to the coders, and the coders were asked to indicate the descriptions that applied to the artwork in the ad of examination. Lastly, coders were asked to indicate from a list of possible descriptions of the call to action whether or not the descriptions applied to the advertisement of examination, and whether or not the advertisement of examination contained an indication of the sponsoring manufacturer or brand. Once the expert coders completed examining each advertisement in the 30-advertisment sample, the expert coders' data

were exported from Qualtrics Online Survey Software to an IBM© SPSS Statistical Software document. This created three separate SPSS data files. The three separate data files were merged into one SPSS document for ease of analysis and interpretation, and used to calculate inter-rater reliability and appeal frequency.

Inter-Rater Reliability

It was important to establish inter-rater reliability in content analysis research (De Swert, 2012). Krippendorff's alpha (α_κ) was the chosen method in this study to establish inter-rater reliability; however, α_κ cannot be run in SPSS and other statistical packages used in social science research without syntax. Syntax is programming language, or commands, used to instruct SPSS how to accomplish a task (Field, 2009). To increase the use of α_κ as a reliability estimate in social science research, Hayes and Krippendorff (2007) developed the syntax necessary to run α_κ through SPSS. The syntax, and the instructions for use, was obtained at www.afhayes.com/public/kalpha.pdf (Hayes & Krippendorff, 2007). The syntax was used to calculate the inter-rater reliability of this study. The results of α_κ reliability estimate are displayed in Table 4.

Table 4

Krippendorff's α reliability estimate

α_κ	LL95%CI	UL95%CI	Units	Observers	Pairs
.62	.44	.80	2,231	3	3,789

The results of α_{κ} in this study were .62. Hayes and Krippendorff (2007) explained various ways to interpret the results of the α_{κ} reliability estimate for inter-rater reliability in content analysis studies. A 1.00 is considered perfect agreement, .80 is considered high agreement, and a .70 is considered appropriate in some cases (De Swert, 2012). However, a lower alpha level may be acceptable when working with α_{κ} because it is considered a conservative index (Lombard, Snyder-Duch & Bracken, 2004). It is true that .62 is considered a lower α_{κ} than what is traditionally acceptable in some content analysis studies; but De Swert (2012) asserted an α_{κ} score as low as .60 is acceptable when accompanied with specific information explaining why the score may be low, and rationale for why it was accepted in the study. Insufficient variation, the tendency for coders to seek exceptions in times of monotonous coding, and the absence of subsample coding to establish inter-rater reliability are possible reasons for a lower $\alpha_{\kappa.}$ A more detailed explanation of each of these concepts is provided in Chapter III.

Data Analysis and Interpretation

Summated rating scales are a popular method of assessment in social science research, and many summated rating scales have been used to measure attitudes, beliefs, emotions, feelings, and other unobservable phenomena (Jupp, 2006). There are four characteristics of a summated rating scale. The first characteristic is the scale requires multiple items. The second characteristic is that each item must be formatted as a rating

scale. A third characteristic is the scale must be created to measure a basic, quantifiable construct. The fourth characteristic of summated rating scales is that the scale is validated through research that supports the interpretation of what scores on the scale signify (Jupp, 2006).

In this study, a summated rating scale was used to measure the number of times the advertisements in each of the samples were deemed rational, emotional, or the construct could not be determined. If the construct could not be determined, it accounted for the times when the coder believed the advertising element had both rational and emotional characteristics. Nominal data, or the number of times each advertisement was deemed rational, emotional, or undetermined by each of the coders, was calculated for each construct and compared to determine which appeal occurred most often in the advertisements.

After the coders completed their assessment of each advertisement in the sample, the scores for each of the individual advertisements coded by two or more coders were calculated. Advertisements scoring from 1% – 33% indicated the advertisement had a low occurrence of words, phrases or artwork indicating emotion based on the definitions that emerged from the literature review described in the coding manual. The advertisements were labeled emotional. Advertisements scoring from 34% – 65% could not be categorized as either rational or emotional; neither appeal was predominant. And advertisements scoring from 66% – 100% indicated the advertisement had a high occurrence of words, phrases, or artwork indicating logic based on the definitions that

emerged from the literature review described in the coding manual. The advertisements were labeled rational. Figure 5 summarizes the summated rating scale parameters.

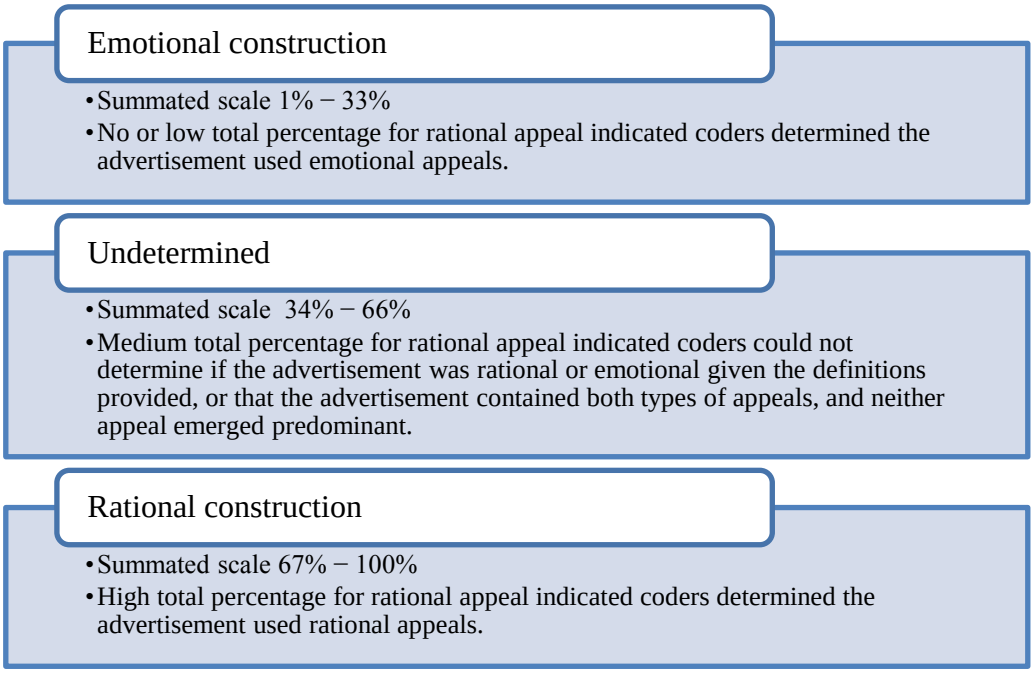

Figure 5. Summated rating scale parameters.

CHAPTER III

RESULTS

In this chapter, the appeal frequency results are presented, which answered the research question: Are tractor advertisements in *Successful Farming* magazine using rational or emotional advertising appeals? Additionally, rationale for accepting a lower α is provided.

Appeal Frequency

To determine the percentage of tractor advertisements that used primarily rational as opposed to emotional appeals, content analysis was used to quantify the appearance of words, phrases, and artwork denoting a rational appeal in the advertisements analyzed compared with the number of times words, phrases, or artwork denoting an emotional appeal was noted. Because of the large number of variables in the research design, syntax to enable the calculation of frequencies for the entire dataset was developed. The study data was nominal, and categorized to denote a rational appeal or an emotional appeal. The percentage of times an expert coder deemed the advertising element used rational appeals, the percentage of times an expert coder deemed the advertising element used emotional appeals, and the percentage of times an expert coder was unable to make a determination as to whether or not the advertising element used rational or emotional appeals was calculated. The frequency and percentage of appeals noted in each advertising element—headline, body copy, artwork, call to action,

signature—was determined, and a total frequency and percentage for each advertisement in the population was calculated. Based on the resulting total percentage, each image was labeled based on the summated rating parameters in Figure 4. The results are listed in Table 5. A graphic summary of the results appear in Figure 6.

Tractor Advertisement Appeal Summary

Seventy-percent of the tractor advertisements in the study population were categorized as rational based on a summated percentage score of 67% to 100%. Greater total percentage scores for rational appeal indicated coders determined the advertisement used rational appeals. Forty-six advertisements in the in 66 advertisement population were labeled rational.

Additionally, 30% of the tractor advertisements in the population were evaluated in this study could not be categorized as emotional or rational; therefore, we identified them as undetermined based on an overall summated percentage score of 34% to 66%. Twenty of the 66 advertisements evaluated in the study were labeled undetermined.

Finally, there were no advertisements in the population labeled emotional. An overall summated percentage score of 1% to 33% would have indicated the advertisement should be labeled emotional, and low total percentage scores for rational appeal would have indicated coders determined the advertisement used emotional appeals. The frequency of rational, emotional, and undetermined appeals in tractor advertising is displayed in Figure 6.

Table 5

Tractor advertising appeal summary

Image	Headline (*n* = 26)				Signature (*n* = 1)				Call to Action (*n* = 5)				Artwork (*n* = 7)				Body Copy (*n* = 12)				Image Total (*n* = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
01	2	100	0	0	1	50	1	50	0	0	2	100	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
02	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
03	2	100	0	0	0	0	2	100	0	0	2	100	2	100	0	0	2	100	0	0	6	60%	4	40%	Undetermined
04	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
05	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
06	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
07	3	100	0	0	0	0	3	100	1	33	2	67	2	67	1	33	3	100	0	0	9	60%	6	40%	Undetermined
08	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
09	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
10	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
11	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
12	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational

Table 5 Continued

Image	Headline (n = 26)				Signature (n = 1)				Call to Action (n = 5)				Artwork (n = 7)				Body Copy (n = 12)				Image Total (n = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
13	2	100	0	0	0	0	3	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	4	30%	Rational
14	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
15	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
16	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
17	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
18	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
19	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
20	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
21	3	100	0	0	0	0	3	100	0	0	3	100	3	100	0	0	3	100	0	0	9	60%	6	40%	Undetermined
22	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
23	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
24	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
25	3	100	0	0	0	0	3	100	1	33	2	67	3	100	0	0	3	100	0	0	10	67%	5	33%	Rational

Table 5 Continued

Image	Headline (n = 26)				Signature (n = 1)				Call to Action (n = 5)				Artwork (n = 7)				Body Copy (n = 12)				Image Total (n = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
26	3	100	0	0	0	0	3	100	0	0	3	100	3	100	0	0	3	100	0	0	9	60%	6	40%	Undetermined
27	2	100	0	0	0	0	2	100	0	0	2	100	1	50	1	50	2	100	0	0	5	50%	5	50%	Undetermined
28	2	100	0	0	0	0	2	100	0	0	2	100	2	100	0	0	2	100	0	0	6	60%	4	40%	Undetermined
29	3	100	0	0	0	0	3	100	0	0	3	100	3	100	0	0	3	100	0	0	9	60%	6	40%	Undetermined
30	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
31	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
32	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
33	3	100	0	0	0	0	3	100	3	100	0	0	3	100	0	0	3	100	0	0	12	80%	3	20%	Rational
34	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
35	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
36	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
37	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
38	3	100	0	0	0	0	3	100	0	0	3	100	3	100	0	0	3	100	0	0	9	60%	6	40%	Undetermined

Table 5 Continued

Image	Headline (n = 26)				Signature (n = 1)				Call to Action (n = 5)				Artwork (n = 7)				Body Copy (n = 12)				Image Total (n = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
39	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
40	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
41	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
42	3	100	0	0	0	0	3	100	3	100	0	0	3	100	0	0	3	100	0	0	12	80%	3	20%	Rational
43	3	100	0	0	0	0	3	100	3	100	0	0	3	100	0	0	3	100	0	0	12	80%	3	20%	Rational
44	3	100	0	0	0	0	3	100	3	100	0	0	3	100	0	0	3	100	0	0	12	80%	3	20%	Rational
45	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
46	3	100	0	0	0	0	3	100	1	33	2	67	3	100	0	0	3	100	0	0	10	67%	5	33%	Rational
47	2	100	0	0	0	0	2	100	1	50	1	50	2	100	2	100	3	100	0	0	8	70%	5	50%	Rational
48	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
49	3	100	0	0	0	0	3	100	2	67	1	33	3	100	0	0	3	100	0	0	11	73%	4	27%	Rational
50	3	100	0	0	0	0	3	100	0	0	3	100	3	100	0	0	3	100	0	0	9	60%	6	40%	Undetermined
51	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational

Table 5 Continued

Image	Headline (n = 26)				Signature (n = 1)				Call to Action (n = 5)				Artwork (n = 7)				Body Copy (n = 12)				Image Total (n = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
52	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
53	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
54	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
55	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
56	1	100	0	0	0	0	1	100	1	100	0	0	1	100	0	0	1	100	0	0	4	80%	1	20%	Rational
57	2	100	0	0	0	0	2	100	2	100	0	0	2	100	0	0	2	100	0	0	8	80%	2	20%	Rational
58	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
59	2	100	0	0	0	0	1	100	0	0	2	100	1	50	1	50	2	100	0	0	5	50%	4	50%	Undetermined
60	3	100	0	0	0	0	3	100	3	100	0	0	3	100	0	0	3	100	0	0	12	80%	3	20%	Rational
61	1	100	0	0	0	0	1	100	0	0	1	100	1	100	0	0	1	100	0	0	3	60%	2	40%	Undetermined
62	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
63	2	100	0	0	0	0	2	100	1	50	1	50	2	100	0	0	2	100	0	0	7	70%	3	30%	Rational
64	2	100	0	0	0	0	2	100	0	0	2	100	2	100	0	0	2	100	0	0	6	60%	4	40%	Undetermined

Table 5 Continued

Image	Headline (n = 26)				Signature (n = 1)				Call to Action (n = 5)				Artwork (n = 7)				Body Copy (n = 12)				Image Total (n = 51)				Outcome
	Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		Rational		Emotional		
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	
65	3	100	0	0	0	0	3	100	1	33	2	67	3	100	0	0	3	100	0	0	10	67%	5	33%	Rational
66	2	100	0	0	0	0	2	100	1	50	1	50	1	50	1	50	2	100	0	0	6	60%	4	40%	Undetermined

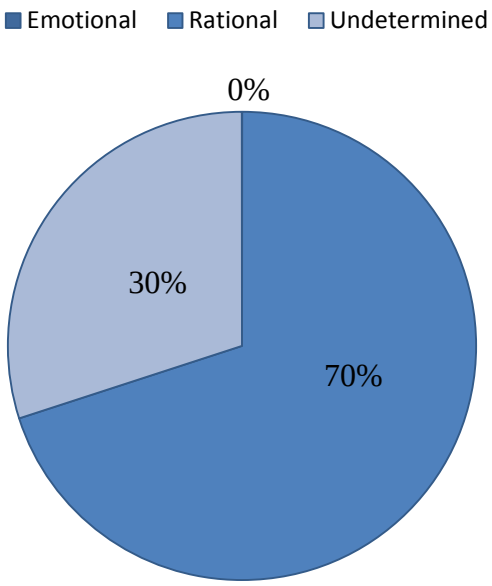

Figure 6. Frequency of advertising appeal.

Answering the Research Question

Based on the frequency of appearance of rational advertising appeal, emotional advertising appeal, and undetermined advertising appeal, or the emergence of both appeals such that it could not be determined which appeal was dominant in the advertisement, 70% of the advertising population were labeled rational, 30% were labeled undetermined, and 0% were labeled emotional.

For the purpose of this study, the research question was posed: Are tractor advertisements in *Successful Farming* magazine using rational or emotional advertising appeals? The purpose of this research question was to determine the existence of rational

and emotional advertising appeals in printed tractor advertisements in *Successful Farming* magazine. The results have implications for future examination of tractor advertisements, and advertisements for other types of agricultural products, services, or ideas. The results of this examination was that the majority of tractor advertisements appearing in *Successful Farming* magazine for the past 10 year predominantly contain rational appeal indicated by the 70% frequency of appearance determined by the coders in the study.

Rationale for the Acceptance of a Lower α

Although there are various ways to interpret the results of the α_κ reliability estimate (Hayes and Krippendorff, 2007), inter-rater reliability in this study was lower than what is often considered to be acceptable. The lower α_κ rating was accepted in this study for various reasons. As noted in Chapter II, reliability coefficients greater than .80 are acceptable, and in some cases .70 is appropriate; however, when working with conservative indices, such as α_κ, lower levels may be necessary (Lombard, Snyder-Duch & Bracken, 2004). Second, according to De Swert (2012), a .80 α_κ score equates good reliability; however, a α_κ score as low as .60 is acceptable when accompanied with specific information explaining why the score may be low, and rationale for why it was accepted in the study. Krippendorff (2004) presented situations researchers may consider when deciding to accept or reject measured reliabilities, including insufficient variation. According to Krippendorff (2004), problems with insufficient variation may

occur when the material presented is repetitive, so much so that the raters become indifferent to coding. The indifference may cause raters to resort to routine scoring patterns lacking the same careful consideration applied to the first units rated in the study (Krippendorff, 2004). The expert coders in this study coded 30 advertisements, with 51 static variables per advertisement—a total of 1,530 static variables coded. I coded 66 advertisements with the same number of static variables coded per advertisement—a total of 3,366 static variables coded. Given the variables were the same for every advertisement coded, it is possible the coders became bored with the coding process, and settled into a pattern of routine coding. This could have contributed to a lower α.

Another factor that may have contributed to a lower α_{κ} was not establishing inter-rater reliability prior to all of the raters in the study coding their complete sample of advertisements. According to De Swert (2012), the first step in establishing inter-rater reliability is to draw a subsample from each of the samples in the study; the subsample is then independently coded by each coder using the original coding instructions. If inter-rater reliability cannot be achieved on the subsample, the instrument, training materials, or coding procedure can be revised as necessary until inter-rater reliability is established (De Swert, 2012). I did not establish inter-rater reliability on a subsample of advertisements before providing the instrument and training materials to the expert coders in the study. If I had done so, it is possible the resulting α_{κ} would be higher.

Finally, Krippendorff (2004) noted coders may start to "look for" exceptions if an overwhelming frequency in the coding emerges. Considering there were no

advertisements labeled emotional, it is possible the coders started to search for anything resembling an emotional element, which in some instances could have affected the inter-rater reliability. Similarly, the coders may have overlooked emotional elements because the rational elements had become prevalent. The tendency to seek exceptions, or overlook the presence of advertising appeal that differ from the majority of appeals already found in the content, may have contributed to a lower α_{κ} in this study.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

In this chapter, limitations and suggestions for future research stemming from this study describing the appearance of rational and emotional advertising appeals in tractor advertising appearing in *Successful Farming* magazine from 2004–2013 are presented. Recommendations for future research are divided into five sections: evaluation of farmer and rancher buying behavior from a consumer perspective, examining the manufacturer – agency relationship, need and motivation to purchase, examining individual advertising elements, and partnering with industry.

Farm Machinery Buying Behavior

One limitation of this study could be examining farmers' and ranchers' buying behavior from a consumer standpoint. Previous studies of farm machinery buying behavior have examined farmers and ranchers as members of producer markets—individuals and businesses obtaining durable goods and business-related services for the purpose of gaining income from their use in the production of other products, or for use within an existing operation (Pride & Ferrell, 2012). According to Pride and Ferrell (2012), farmers comprise a producer market for machinery, agricultural chemicals, seed, and livestock. Research of producer market purchase behavior in relation to tractors and other farm machinery (Foxall, 1979; Kool, Meulenberg & Broens, 1997; Wally, Custance, Taylor, Lindgreen & Hingley, 2007; Drake, 2014) concluded the purchase behaviors of farmers and ranchers are comparative to industrial buying behavior.

However, the Business Buying Decision Process followed by industrial buyers begins with the same first step as the CBDP: problem recognition (Pride & Ferrell, 2012). Therefore, Pride and Ferrell's (2012) assertion in Chapter 1 that emotion motivates purchase behavior could hold true in business buying behavior. Foxall (1979) posited the farm machinery purchase might be influenced less by financial logic and more on social, psychosocial, and reference group (other farmers) influences, which is similar to factors (e.g., motives, knowledge, attitudes, self-concept) influencing consumer buying behavior (Pride & Ferrell, 2012). Examining social, psychosocial, and reference group influences on farmers' and ranchers' purchase of farm machinery and other agricultural products is an area for future study.

Moreover, previous studies have concluded the level of problem solving-effort (extensive to routine) fluctuates based on the type of product purchased (e.g., farm machinery vs. chemicals) and the price of the product under consideration (high or low); these factors can influence farmers' purchase decisions (Kool, Meulenberg & Broens, 1997). The consumers' level of involvement with the product under consideration determines the type of problem-solving they will employ; products that are expensive with a high level of social visibility have higher levels of involvement than products that are less expensive with no social risk (Pride & Ferrell, 2012). Fox (1979) suggested other farmers have influence on the choices farmers make regarding equipment purchases. Tractors are also very expensive. This study examined advertising appeal influence without consideration for level of problem-solving required or product price; the absence of these two factors in this study could limit the findings.

Examining the Manufacturer – Agency Relationship

The advertising business process was introduced in Chapter 1. To briefly summarize, manufacturers sponsored advertisements, and worked with advertising agencies to create the messages based upon their input and direction. As noted in Chapter 1, the manufacturer and the advertising agency shared responsibility for the development of the advertisement (Pride & Ferrell, 2012). Therefore, examination of the manufacturer/agency relationship is fundamental to understanding how the findings in this study could be useful to both manufacturers and advertising agencies.

For example, in this study rational advertising appeal emerged with the highest frequency of appearance in the tractor advertising from *Successful Farming* magazine over the past decade. Recalling the advertising business process discussed in Chapter I (Figure 1), and based upon the results of this study that determined advertising appeals in tractor advertising in *Successful Farming* magazine were predominantly rational, one might question if the manufactures sponsoring the advertising are providing direction to the advertising agency that rational constructs be used in developing the advertising message, and as a result, the advertising agencies employed by the manufactures are creating advertising with rational appeals to satisfy this business direction. Also, it is possible advertising agencies are presenting manufacturers with rationally constructed advertising options, and manufacturers are not aware that emotional advertising appeals are more effective in initiating the CBDP. Furthermore, some manufacturers may not be aware of the CBDP. As such, manufacturers could be unknowingly losing potential business by not using emotional advertising appeals since emotional appeals are the

appeals that stimulate awareness of a need. A key principal of the CBDP is the idea that behavior is influenced by emotion (Pride & Ferrell, 2012), and it is the advertising appeal that draws the audience into the message (Dix & Marchegiania, 2013). Further research could help build manufacturers' awareness of the power of emotional advertising appeal, and perhaps when agencies present emotionally constructed messages, manufacturers will consider approving those advertisements.

Moreover, if advertising agencies are presenting advertising using emotional appeals as options to the manufacturer, and manufactures are not approving the advertising using emotional appeals, future studies of agricultural advertising could include qualitative research designs in which the researcher investigates the relationship between manufacturers and their advertising agencies on a much deeper level, such as interviewing manufacturers of agricultural products and learning about the relationship they have with their advertising agencies to learn first-hand about the advertising business process from an intimate point of view.

Need and Motivation to Purchase

As previously stated in Chapter I, the goal of advertising is to stimulate a purchase decision. For the purpose of this study, personal determinants were considered to be the complex cognitive process farmers and ranchers use to perceive rational and emotional advertising appeals when reading tractor advertisements in *Successful Farming* magazine (the environmental determinant in this study). Similarly, the behavioral determinant was conceptualized as the problem recognition step of CBDP—

the farmers' or ranchers' motivation to take or not take action based on the influence of the advertising appeal. Because the purpose of this study was limited to describing the elements of rational or emotional appeal in printed tractor advertisements in *Successful Farming* magazine, consumers' need for a product and consumers' motivation to purchase a product were not included in this analysis. As noted earlier, the majority of respondents to the *Perceptions of Ag [sic] Media* survey indicated manufacturer advertisements were not considered when they made a purchase decision, but could this be because the advertising elements did not contain the appropriate appeal needed to stimulate the CBDP? A way to take this study describing the elements of rational or emotional appeal in magazine advertisements to the next level could be to conduct subsequent studies that test the use of different emotional appeals on a farmer and rancher audience, as well as examining the farmers' and ranchers' level of need for the agricultural product. Subsequent studies could examine agricultural products purchased annually, including seed, agrochemicals, and crop insurance, as well as products needed for a specific farming practice, such as planting, application, or harvesting.

Moreover, future research could include creating advertising containing the emotions drawn from the *Feelings Inventory* to assess farmers and ranchers opinions about emotional tractor advertising. A sample of farmers and ranchers could be drawn from a population of subscribers to an agricultural magazine, or from a population of farmer and ranchers who are members of a professional agricultural organization, and the sample of farmers and ranchers could be asked a series of questions that would indicate whether or not the advertisements stimulated the CBDP. This research could be

a stepping stone to bridging the gap between what the manufactures of agricultural products and services think are important features and benefits to highlight in advertising messages, the advertising agencies or marketing consultants execution of the creative input they receive from the manufacturers when hired to craft advertising messages, and how farmers and ranchers interpret and use the advertising messages in their decision-making process.

Examining Individual Advertising Elements

Another area of inquiry for future research would be to examine each advertising element individually—headline, body copy, artwork, call to action, signature—to see how each element affects the initiation of the CBDP. From the SCT standpoint in this study, the environmental determinant was the elements of rational or emotional appeal in the advertisement as a whole, and an overall frequency of occurrence was calculated, and a label was given to the complete advertisement, not its individual parts. However, if instead of calculating a total for the advertisement researchers calculated a total for each specific element in isolation from the other elements in the advertisements, researchers could examine which advertising appeals are found in specific elements, such as the headline or body copy. This could be useful in terms of future research. For instance, 30% of the advertisements in this study were labeled undetermined, which meant the coders could not determine if the advertisement contained rational or emotional appeals, or if the advertisement contained both types of appeals. If the expert coders could not

determine the appeal, it is possible the elements are not congruent in appeal, which could be confusing to the audience—a research question for a subsequent study.

Similarly, it is possible the headline contained rational elements and the body copy contained emotional elements, but if the consumer didn't read past the headline—operationally defined in this study as the sentence in the advertisement that people read first and written in a way that draws attention to or entices consumers to read the entire advertisement (Table 3)—the consumer would not read the emotional elements, those elements that initiate the CBDP, the advertising contained because the consumer never made it past the headline.

Partnering with Industry

The results of this research study are important to both academia and industry with a vested interest in the promotion and preservation of agriculture. Providing the results of this research study to manufacturers and/or advertising agencies with agricultural clients is one of many steps in effectuating change—not just change in how manufacturers and advertising agencies advertise to consumers, but also in how agricultural advertising researchers and industry professionals work together. According to Heath and Feldwick (2008), it is up to researchers to "challenge traditional thinking in clients and agencies, and work with them to develop new methodologies that will offer advertisers a real competitive advantage" (p. 58). Establishing academic and industry partnerships, sharing common goals, and working towards solutions to accomplish those goals are just a few of the ways in which researchers can rise up to this challenge.

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APPENDIX A

3/3/2015

Emotional Advertising Appeals

- Arouses feelings or reactions
- Stimulates psychological, social or emotional needs
- Creates positive or negative emotions
  - Positive emotional appeals: happiness, love, joy, excitement, interest, surprise, hope
  - Negative emotion appeals: anger, disgust, sadness, distress, guilt, shame

Study Purpose

- Describe advertising appeals in agricultural advertisements
- Identify percentage of advertisements that are rational, emotional or both
- Establish a baseline for future research

3

Your Role as a Coder

- Help to identify the advertising appeal in each tractor advertisement
- 30 tractor ads
- Answer a series of questions: Y or N
- Advertising elements: headline, body copy, artwork, signature, call to action

Step-by-Step Instructions

- Know definitions of elements before you begin coding
- Read each element and answer the corresponding questions
- Answer questions in order
- Select the choice that best reflects your initial reaction to each question: yes or no
- Refer to the example as needed
- Use start/stop and back button functionality

Advertising Elements

Headline: The sentence in the advertisement that people read first; used to grab attention or intrigue consumers so that they will want to read the rest of the advertisement.

Body copy: The verbiage in the advertising that expands upon a specific idea or issue, communicates the benefits of the product in way that will satisfy the consumer's objectives for using the product, and supports any advertising claims made in the headline.

Artwork: The graphic(s) in the ad including photographs, illustrations, charts, graphs and other images that are used to communicate an idea quickly or convey ideas and concepts that may be difficult to verbally communicate.

Signature: All information included in the advertisement that identifies the business sponsoring the advertisement

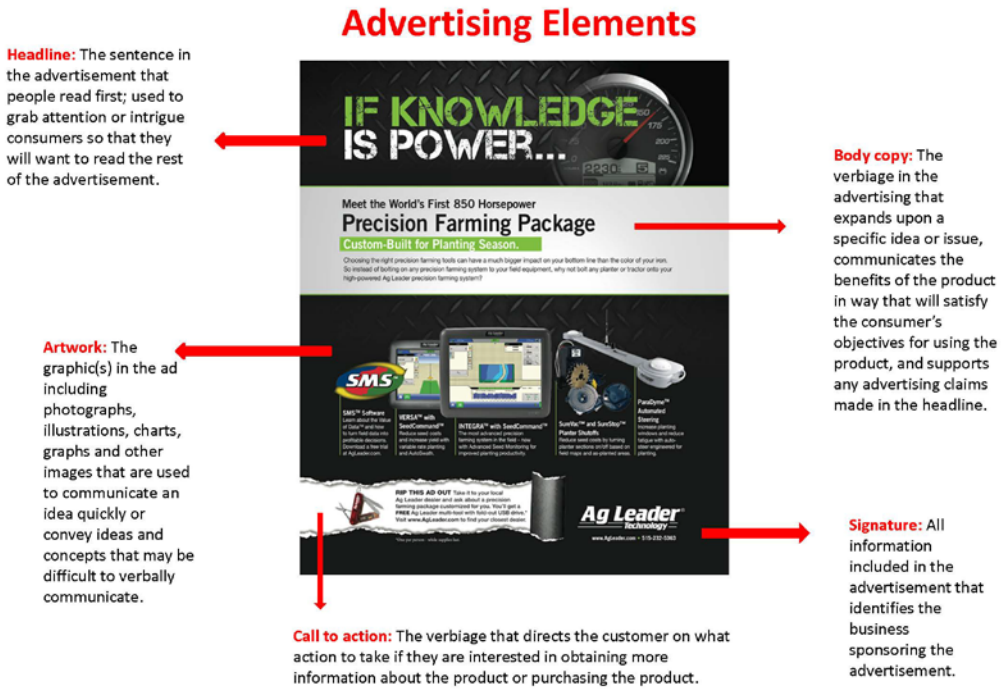
Call to action: The verbiage that directs the customer on what action to take if they are interested in obtaining more information about the product or purchasing the product.

Questions?

Thank you again for being an instrumental part of this research project. If you have any questions regarding the study, the coding process, the coding instrument or operational definitions, please contact me any time at lori.costello@ag.tamu.edu or 515.556.6057.

5

APPENDIX B


Advertising Elements
Headline: The sentence in the advertisement that people read first; used to grab attention or intrigue consumers so that they will want to read the rest of the advertisement.
IF KNOWLEDGE IS POWER...
Meet the World's First 850 Horsepower
Precision Farming Package
Custom-Built for Planting Season.
Body copy: The verbiage in the advertising that expands upon a specific idea or issue, communicates the benefits of the product in way that will satisfy the consumer's objectives for using the product, and supports any advertising claims made in the headline.
Artwork: The graphic(s) in the ad including photographs, illustrations, charts, graphs and other images that are used to communicate an idea quickly or convey ideas and concepts that may be difficult to verbally communicate.
SMS
Ag Leader Technology
Signature: All information included in the advertisement that identifies the business sponsoring the advertisement.
Call to action: The verbiage that directs the customer on what action to take if they are interested in obtaining more information about the product or purchasing the product.

APPENDIX C

September 12, 2014

Dear Dave King,

Thank you for your participation in this study of tractor advertising. Your willingness to provide your time, knowledge and expertise is greatly appreciated and ensures that the study will be reliable and valid.

Study Background

Agricultural companies spend millions of dollars on advertising annually. For example, according to the Deere and Company 2013 annual report, advertising expenditures were $183 million. Expenditures for advertising in magazines, such as *Successful Farming*, are a tactic included in many companies' marketing mix; however, farmers have indicated in media surveys that they do not use advertising when making the decision to purchase an agricultural product.

Pride and Ferrell developed the Consumer Buying Decision Process, a model that outlines the steps consumers go through after reading advertising messages. Problem recognition is the first step in the process. Consumers experience problem recognition when they realized they have a need that can be satisfied through acquisition of a product or service. Pride and Ferrell indicated advertising has the ability to trigger problem recognition. Similarly, Pride and Ferrell also believed behavior is influenced by emotion.

Rational and Emotional Advertising Appeals

There are two predominant ways advertisements are constructed. The first is through rational appeals. Rational appeals in this study are defined as verbiage that lists or describes product benefits, provides convincing proof that the information is truthful and demonstrable or persuades through the promise of financial success. Rational appeals use logic, economy, utility or reasoning to convey the key messages.

The second way advertisements are constructed is using emotional appeals. Emotional appeals in this study are defined as verbiage that arouses feelings or reactions, or stimulates psychological, social or emotional needs. Emotional appeals can be positive or negative. Examples of positive emotional appeals may include happiness, love, joy, excitement, interest, surprise and hope. Examples of negative appeals include anger, disgust, sadness, distress, guilt or shame.

Why is an understanding of advertising appeals in agricultural advertising important? If the appeals in tractor advertising are not initiating problem recognition, businesses could be wasting valuable time and money on advertising that's not working.

The purpose of this study is to describe advertising appeals used in agricultural advertisements to establish a baseline for future research about agricultural advertising and its ability to influence the purchase decision.

Your Role as a Coder

As a coder in this study, your expertise will be instrumental in identifying the appeal the advertisement uses to initiate interest in, and potential purchase of, different makes and models of tractors.

Step-by-Step Instructions

You will receive an electronic coding instrument, or survey, containing 30 unique tractor advertisements that have appeared in Successful Farming magazine from 2004 – 2013. Each set of questions pertains to a specific element of the advertisement: headline, body copy, artwork, call to action and signature. Operational definitions of these sections are provided below and in the accompanying training video. You are asked to answer yes or no to each question in the series. To ensure that each advertisement is coded using the same method across all coders in the study, please adhere to the following guidelines as you work through each advertisement in your sample:

1. Familiarize yourself with the operational definitions provided below (also available in the Advertising Elements example included) prior to beginning the coding process.
2. Read and examine each element separately, then answer the questions that correspond with the specific element. Try to answer all of the questions before moving to the next element. Avoid jumping from element to element, as this may result in confusion and inaccurate responses.
3. Answer the questions in the order they appear in each section of the coding instrument until you have completely coded the advertisement.

You have the option to leave the coding instrument at any time during the process and return to it at a later time. The system will save your work.

Operational Definitions

Headline: The sentence in the advertisement that people read first; used to grab attention or intrigue consumers so that they will want to read the rest of the advertisement.

Body copy: The verbiage in the advertising that expands upon a specific idea or issue, communicates the benefits of the product in way that will satisfy the consumer's objectives for using the product, and supports any advertising claims made in the headline.

Artwork: The graphic(s) in the ad including photographs, illustrations, charts, graphs and other images that are used to communicate an idea quickly or convey ideas and concepts that may be difficult to verbally communicate.

Call to action: The verbiage that directs the customer on what action to take if they are interested in obtaining more information about the product or purchasing the product.

Signature: All information included in the advertisement that identifies the business sponsoring the advertisement.

Thank you again for being an instrumental part of this research project. If you have any questions regarding the study, the coding process, the coding instrument or operational definitions, please contact me any time at lori.costello@ag.tamu.edu or 515.556.6057.

Sincerely,

Lori Costello

APPENDIX D

Variable	Description (Label)	Type	Coding	Item
Section 1 Instructions Please read and consider the headline in the ad.				
Q1_1	The headline refers to the product's features.	Nominal	1 = Yes; 0 = No	Q1_1
Q1_2	The headline refers to the product's benefits.	Nominal	1 = Yes; 0 = No	Q1_2
Q1_3	The headline asks a question.	Nominal	1 = Yes; 0 = No	Q1_3
Q1_4	The headline offers a discount or refers to a price point.	Nominal	1 = Yes; 0 = No	Q1_4
Q1_5	The headline cites a statistic or fact.	Nominal	1 = Yes; 0 = No	Q1_5
Q1_6	The headline refers to product quality or usefulness.	Nominal	1 = Yes; 0 = No	Q1_6
Q1_7	The headline alludes to a psychological need.	Nominal	1 = Yes; 0 = No	Q1_7
Q1_8	The headline alludes to a social need.	Nominal	1 = Yes; 0 = No	Q1_8
Q1_9	The headline invokes feelings of affection (warmth, tenderness, compassion).	Nominal	1 = Yes; 0 = No	Q1_9
Q1_10	The headline conjures memories.	Nominal	1 = Yes; 0 = No	Q1_10
Q1_11	The headline invokes feelings of engagement (curiosity, interest, intrigue).	Nominal	1 = Yes; 0 = No	Q1_11
Q1_12	The headline connects the consumer personally to the product.	Nominal	1 = Yes; 0 = No	Q1_12
Q1_13	The headline invokes feelings of hopefulness (expectant, encouraged, optimistic).	Nominal	1 = Yes; 0 = No	Q1_13
Q1_14	The headline invokes feelings of confidence (safety, security, empowerment, pride).	Nominal	1 = Yes; 0 = No	Q1_14
Q1_15	The headline invokes feelings of excitement (passion, amazement, enthusiasm).	Nominal	1 = Yes; 0 = No	Q1_15

Q1_16	The headline invokes feelings of gratefulness (appreciation, thankfulness, moved).	Nominal	1 = Yes; 0 = No	Q1_16
Q1_17	The headline invokes feelings of joyfulness (delight, happiness, pleasure).	Nominal	1 = Yes; 0 = No	Q1_17
Q1_18	The headline invokes feelings of peacefulness (comfortable, fulfilled, satisfaction).	Nominal	1 = Yes; 0 = No	Q1_18
Q1_19	The headline invokes feelings of confusion (baffled, ambivalence, hesitancy).	Nominal	1 = Yes; 0 = No	Q1_19
Q1_20	The headline invokes feelings of disconnection (apathy, indifference, boredom).	Nominal	1 = Yes; 0 = No	Q1_20
Q1_21	The headline invokes feelings of yearning (envy, jealousy, nostalgia).	Nominal	1 = Yes; 0 = No	Q1_21
Q1_22	The headline invokes feelings of sadness (depression, disappointment, desperation).	Nominal	1 = Yes; 0 = No	Q1_22
Q1_23	The headline invokes feelings of annoyance (aggravation, frustration, dismay).	Nominal	1 = Yes; 0 = No	Q1_23
Q1_24	The headline invokes feelings of anger (rage, resentment, fury).	Nominal	1 = Yes; 0 = No	Q1_24
Q1_25	The headline invokes feelings of being afraid (mistrust, fright, suspicion).	Nominal	1 = Yes; 0 = No	Q1_25
Q1_26	The headline invokes feelings of pain (grief, devastation, loneliness).	Nominal	1 = Yes; 0 = No	Q1_26
Section 2 Instructions Please read and consider the body copy (all other verbiage in the ad, excluding the headline, call to action, and signature) in the ad.				
Q2_1	The body copy tells me what I need to know about the product to make an informed buying decision.	Nominal	1 = Yes; 0 = No	Q2_1

Q2_2	The body copy provides reasons for purchasing the product.	Nominal	1 = Yes; 0 = No	Q2_2
Q2_3	The body copy describes a special offer available only for a limited time.	Nominal	1 = Yes; 0 = No	Q2_3
Q2_4	The body copy describes the product's features and benefits.	Nominal	1 = Yes; 0 = No	Q2_4
Q2_5	The body copy refers to product quality or usefulness.	Nominal	1 = Yes; 0 = No	Q2_5
Q2_6	The body copy contains facts about the product.	Nominal	1 = Yes; 0 = No	Q2_6
Q2_7	The body copy tells a story that reminds of past experiences or situations.	Nominal	1 = Yes; 0 = No	Q2_7
Q2_8	After reading the body copy, I feel a level of confidence about the product.	Nominal	1 = Yes; 0 = No	Q2_8
Q2_9	The body copy helps me feel positive about the product.	Nominal	1 = Yes; 0 = No	Q2_9
Q2_10	The body copy makes me feel as though the product will satisfy my needs.	Nominal	1 = Yes; 0 = No	Q2_10
Q2_11	The body copy makes me feel personally connected to the product.	Nominal	1 = Yes; 0 = No	Q2_11
Q2_12	The body copy makes me feel that if I purchase the product, I will be a better person.	Nominal	1 = Yes; 0 = No	Q2_12
Section 3 Instructions Please examine and consider the graphic in the ad.				
Q3_1	The ad contains one graphic (photography or artwork) of the product.	Nominal	1 = Yes; 0 = No	Q3_1
Q3_2	The ad contains multiple graphics (photography or artwork) of the product.	Nominal	1 = Yes; 0 = No	Q3_2

Q3_3	The ad contains graphics (photography or artwork) that are unrelated to the product.	Nominal	1 = Yes; 0 = No	Q3_3
Q3_4	The ad contains a celebrity spokesperson.	Nominal	1 = Yes; 0 = No	Q3_4
Q3_5	The ad contains graphs, charts, or tables with facts or statistics about the product.	Nominal	1 = Yes; 0 = No	Q3_5
Q3_6	The ad contains no graphic (photography or artwork) of the product, only body copy.	Nominal	1 = Yes; 0 = No	Q3_6
Q3_7	The ad contains a male or female model using the product.	Nominal	1 = Yes; 0 = No	Q3_7
Section 4 Instructions Please read and consider the call to action in the ad.				
Q4_1	The call to action verbiage creates a sense of urgency to purchase the product.	Nominal	1 = Yes; 0 = No	Q4_1
Q4_2	The call to action tells the consumer what to do next.	Nominal	1 = Yes; 0 = No	Q4_2
Q4_3	The call to action encourages the consumer to visit a retail sales outlet.	Nominal	1 = Yes; 0 = No	Q4_3
Q4_4	The call to action encourages the consumer to talk to a sales representative.	Nominal	1 = Yes; 0 = No	Q4_4
Q4_5	The call to action invites the consumer to visit the manufacturer's website.	Nominal	1 = Yes; 0 = No	Q4_5
Q5	Is it clear who is the manufacturer/brand sponsoring the advertisement?	Nominal	1 = Yes; 0 = No	Q5
Q1_1RC	The headline refers to the product's features. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_1
Q1_2RC	The headline refers to the product's benefits. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_2
Q1_3RC	The headline asks a question. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_3

Q1_4RC	The headline offers a discount or refers to a price point. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_4
Q1_5RC	The headline cites a statistic or fact. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_5
Q1_6RC	The headline refers to product quality or usefulness. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_6
Q2_1RC	The body copy tells me what I need to know about the product to make an informed buying decision. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_1
Q2_2RC	The body copy provides reasons for purchasing the product. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_2
Q2_3RC	The body copy describes a special offer available only for a limited time. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_3
Q2_4RC	The body copy describes the product's features and benefits. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_4
Q2_5RC	The body copy refers to product quality or usefulness. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_5
Q2_6RC	The body copy contains facts about the product. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_6
Variable	Description (Label)	Type	Coding	Item
Section 1 Instructions Please read and consider the headline in the ad.				
Q1_1	The headline refers to the product's features.	Nominal	1 = Yes; 0 = No	Q1_1
Q1_2	The headline refers to the product's benefits.	Nominal	1 = Yes; 0 = No	Q1_2
Q1_3	The headline asks a question.	Nominal	1 = Yes; 0 = No	Q1_3
Q1_4	The headline offers a discount or refers to a price point.	Nominal	1 = Yes; 0 = No	Q1_4
Q1_5	The headline cites a statistic or fact.	Nominal	1 = Yes; 0 = No	Q1_5

Q1_6	The headline refers to product quality or usefulness.	Nominal	1 = Yes; 0 = No	Q1_6
Q1_7	The headline alludes to a psychological need.	Nominal	1 = Yes; 0 = No	Q1_7
Q1_8	The headline alludes to a social need.	Nominal	1 = Yes; 0 = No	Q1_8
Q1_9	The headline invokes feelings of affection (warmth, tenderness, compassion).	Nominal	1 = Yes; 0 = No	Q1_9
Q1_10	The headline conjures memories.	Nominal	1 = Yes; 0 = No	Q1_10
Q1_11	The headline invokes feelings of engagement (curiosity, interest, intrigue).	Nominal	1 = Yes; 0 = No	Q1_11
Q1_12	The headline connects the consumer personally to the product.	Nominal	1 = Yes; 0 = No	Q1_12
Q1_13	The headline invokes feelings of hopefulness (expectant, encouraged, optimistic).	Nominal	1 = Yes; 0 = No	Q1_13
Q1_14	The headline invokes feelings of confidence (safety, security, empowerment, pride).	Nominal	1 = Yes; 0 = No	Q1_14
Q1_15	The headline invokes feelings of excitement (passion, amazement, enthusiasm).	Nominal	1 = Yes; 0 = No	Q1_15
Q1_16	The headline invokes feelings of gratefulness (appreciation, thankfulness, moved).	Nominal	1 = Yes; 0 = No	Q1_16
Q1_17	The headline invokes feelings of joyfulness (delight, happiness, pleasure).	Nominal	1 = Yes; 0 = No	Q1_17
Q1_18	The headline invokes feelings of peacefulness (comfortable, fulfilled, satisfaction).	Nominal	1 = Yes; 0 = No	Q1_18
Q1_19	The headline invokes feelings of confusion (baffled, ambivalence, hesitancy).	Nominal	1 = Yes; 0 = No	Q1_19
Q1_20	The headline invokes feelings of disconnection (apathy, indifference, boredom).	Nominal	1 = Yes; 0 = No	Q1_20

Q1_21	The headline invokes feelings of yearning (envy, jealousy, nostalgia).	Nominal	1 = Yes; 0 = No	Q1_21
Q1_22	The headline invokes feelings of sadness (depression, disappointment, desperation).	Nominal	1 = Yes; 0 = No	Q1_22
Q1_23	The headline invokes feelings of annoyance (aggravation, frustration, dismay).	Nominal	1 = Yes; 0 = No	Q1_23
Q1_24	The headline invokes feelings of anger (rage, resentment, fury).	Nominal	1 = Yes; 0 = No	Q1_24
Q1_25	The headline invokes feelings of being afraid (mistrust, fright, suspicion).	Nominal	1 = Yes; 0 = No	Q1_25
Q1_26	The headline invokes feelings of pain (grief, devastation, loneliness).	Nominal	1 = Yes; 0 = No	Q1_26
Section 2 Instructions Please read and consider the body copy (all other verbiage in the ad, excluding the headline, call to action, and signature) in the ad.				
Q2_1	The body copy tells me what I need to know about the product to make an informed buying decision.	Nominal	1 = Yes; 0 = No	Q2_1
Q2_2	The body copy provides reasons for purchasing the product.	Nominal	1 = Yes; 0 = No	Q2_2
Q2_3	The body copy describes a special offer available only for a limited time.	Nominal	1 = Yes; 0 = No	Q2_3
Q2_4	The body copy describes the product's features and benefits.	Nominal	1 = Yes; 0 = No	Q2_4
Q2_5	The body copy refers to product quality or usefulness.	Nominal	1 = Yes; 0 = No	Q2_5
Q2_6	The body copy contains facts about the product.	Nominal	1 = Yes; 0 = No	Q2_6

Q2_7	The body copy tells a story that reminds of past experiences or situations.	Nominal	1 = Yes; 0 = No	Q2_7
Q2_8	After reading the body copy, I feel a level of confidence about the product.	Nominal	1 = Yes; 0 = No	Q2_8
Q2_9	The body copy helps me feel positive about the product.	Nominal	1 = Yes; 0 = No	Q2_9
Q2_10	The body copy makes me feel as though the product will satisfy my needs.	Nominal	1 = Yes; 0 = No	Q2_10
Q2_11	The body copy makes me feel personally connected to the product.	Nominal	1 = Yes; 0 = No	Q2_11
Q2_12	The body copy makes me feel that if I purchase the product, I will be a better person.	Nominal	1 = Yes; 0 = No	Q2_12
Section 3 Instructions Please examine and consider the graphic in the ad.				
Q3_1	The ad contains one graphic (photography or artwork) of the product.	Nominal	1 = Yes; 0 = No	Q3_1
Q3_2	The ad contains multiple graphics (photography or artwork) of the product.	Nominal	1 = Yes; 0 = No	Q3_2
Q3_3	The ad contains graphics (photography or artwork) that are unrelated to the product.	Nominal	1 = Yes; 0 = No	Q3_3
Q3_4	The ad contains a celebrity spokesperson.	Nominal	1 = Yes; 0 = No	Q3_4
Q3_5	The ad contains graphs, charts, or tables with facts or statistics about the product.	Nominal	1 = Yes; 0 = No	Q3_5
Q3_6	The ad contains no graphic (photography or artwork) of the product, only body copy.	Nominal	1 = Yes; 0 = No	Q3_6
Q3_7	The ad contains a male or female model using the product.	Nominal	1 = Yes; 0 = No	Q3_7

Section 4 Instructions Please read and consider the call to action in the ad.				
Q4_1	The call to action verbiage creates a sense of urgency to purchase the product.	Nominal	1 = Yes; 0 = No	Q4_1
Q4_2	The call to action tells the consumer what to do next.	Nominal	1 = Yes; 0 = No	Q4_2
Q4_3	The call to action encourages the consumer to visit a retail sales outlet.	Nominal	1 = Yes; 0 = No	Q4_3
Q4_4	The call to action encourages the consumer to talk to a sales representative.	Nominal	1 = Yes; 0 = No	Q4_4
Q4_5	The call to action invites the consumer to visit the manufacturer's website.	Nominal	1 = Yes; 0 = No	Q4_5
Q5	Is it clear who is the manufacturer/brand sponsoring the advertisement?	Nominal	1 = Yes; 0 = No	Q5
Q1_1RC	The headline refers to the product's features. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_1
Q1_2RC	The headline refers to the product's benefits. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_2
Q1_3RC	The headline asks a question. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_3
Q1_4RC	The headline offers a discount or refers to a price point. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_4
Q1_5RC	The headline cites a statistic or fact. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_5
Q1_6RC	The headline refers to product quality or usefulness. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q1_6
Q2_1RC	The body copy tells me what I need to know about the product to make an informed buying decision. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_1

Q2_2RC	The body copy provides reasons for purchasing the product. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_2
Q2_3RC	The body copy describes a special offer available only for a limited time. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_3
Q2_4RC	The body copy describes the product's features and benefits. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_4
Q2_5RC	The body copy refers to product quality or usefulness. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_5
Q2_6RC	The body copy contains facts about the product. (Rational)	Nominal	0 = Yes; 1 = No	Recoded from Q2_6

RQ1. Are tractor advertisements in *Successful Farming* magazine using rational or emotional advertising appeals?
RO1.1: Describe the frequency of components appearing in the advertisements.

Analysis 1.1			
IV(s):	Q1_1, Q1_2, Q1_3, Q1_4, Q1_5, Q1_6, Q1_7, Q1_8, Q1_9, Q1_10, Q1_11, Q1_12, Q1_13, Q1_14, Q1_15, Q1_16, Q1_17, Q1_18, Q1_19, Q1_20, Q1_21, Q1_22, Q1_23, Q1_24, Q1_25, Q1_26, Q2_1, Q2_2, Q2_3, Q2_4, Q2_5, Q2_6, Q2_7, Q2_8, Q2_9, Q2_10, Q2_11, Q2_12, Q3_1, Q3_2, Q3_3, Q3_4, Q3_5, Q3_6, Q3_7, Q4_1, Q4_2, Q4_3, Q4_4, Q4_4, Q5	DV(s):	
Descriptive analyses (*f* and %):			
Descriptive analyses (M and SD):			

RO1.2: Determine if the advertising appeal is rational or emotional.

Analysis 1.2			
IV(s):	Q1_1RC, Q1_2RC, Q1_RC3, Q1_RC4, Q1_RC5, Q1_RC6, Q1_7, Q1_8, Q1_9, Q1_10, Q1_11, Q1_12, Q1_13, Q1_14, Q1_15, Q1_16, Q1_17, Q1_18, Q1_19, Q1_20, Q1_21, Q1_22, Q1_23, Q1_24, Q1_25, Q1_26, Q2_RC1, Q2_RC2, Q2_RC3, Q2_RC4, Q2_RC5, Q2_RC6, Q2_7, Q2_8, Q2_9, Q2_10, Q2_11, Q2_12	DV(s):	
Descriptive analyses (*f* and %):			
Descriptive analyses (M and SD):			

RO1.2: Compare, predict, explain, etc.…

Analysis X.X			
IV(s):		DV(s):	
Inferential analysis (*t*-test, ANOVA, ANCOVA, MANOVA, linear regression, etc.):			

APPENDIX E

Syntax used to calculate appeal frequency.

****ImageXX Recode SYSMIS to SYSMIS, 1 to 1, and 2 to 0****

```
RECODE ImageXX_B1_1_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_01_RCREV2.
RECODE ImageXX_B1_2_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_02_RCREV2.
RECODE ImageXX_B1_3_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_03_RCREV2.
RECODE ImageXX_B1_4_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_04_RCREV2.
RECODE ImageXX_B1_5_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_05_RCREV2.
RECODE ImageXX_B1_6_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_06_RCREV2.
RECODE ImageXX_B1_7 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_07_RCREV2.
RECODE ImageXX_B1_8 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_08_RCREV2.
RECODE ImageXX_B1_9 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_09_RCREV2.
RECODE ImageXX_B1_10 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_10_RCREV2.
RECODE ImageXX_B1_11 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_11_RCREV2.
RECODE ImageXX_B1_12 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_12_RCREV2.
RECODE ImageXX_B1_13 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_13_RCREV2.
RECODE ImageXX_B1_14 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_14_RCREV2.
RECODE ImageXX_B1_15 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_15_RCREV2.
RECODE ImageXX_B1_16 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_16_RCREV2.
RECODE ImageXX_B1_17 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_17_RCREV2.
RECODE ImageXX_B1_18 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_18_RCREV2.
RECODE ImageXX_B1_19 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_19_RCREV2.
RECODE ImageXX_B1_20 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_20_RCREV2.
RECODE ImageXX_B1_21 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_21_RCREV2.
RECODE ImageXX_B1_22 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_22_RCREV2.
RECODE ImageXX_B1_23 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_23_RCREV2.
RECODE ImageXX_B1_24 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_24_RCREV2.
RECODE ImageXX_B1_25 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_25_RCREV2.
RECODE ImageXX_B1_26 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B1_26_RCREV2.
RECODE ImageXX_B2_1_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_01_RCREV2.
RECODE ImageXX_B2_2_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_02_RCREV2.
RECODE ImageXX_B2_3_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_03_RCREV2.
RECODE ImageXX_B2_4_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_04_RCREV2.
RECODE ImageXX_B2_5_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_05_RCREV2.
RECODE ImageXX_B2_6_RC (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_06_RCREV2.
RECODE ImageXX_B2_7 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_07_RCREV2.
RECODE ImageXX_B2_8 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_08_RCREV2.
RECODE ImageXX_B2_9 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_09_RCREV2.
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RECODE ImageXX_B2_10 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_10_RCREV2.
RECODE ImageXX_B2_11 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_11_RCREV2.
RECODE ImageXX_B2_12 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B2_12_RCREV2.
RECODE ImageXX_B3_1 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_01_RCREV2.
RECODE ImageXX_B3_2 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_02_RCREV2.
RECODE ImageXX_B3_3 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_03_RCREV2.
RECODE ImageXX_B3_4 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_04_RCREV2.
RECODE ImageXX_B3_5 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_05_RCREV2.
RECODE ImageXX_B3_6 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_06_RCREV2.
RECODE ImageXX_B3_7 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B3_07_RCREV2.
RECODE ImageXX_B4_1 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_01_RCREV2.
RECODE ImageXX_B4_2 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_02_RCREV2.
RECODE ImageXX_B4_3 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_03_RCREV2.
RECODE ImageXX_B4_4 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_04_RCREV2.
RECODE ImageXX_B4_5 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_05_RCREV2.
RECODE ImageXX_B4_6 (2=0) (1=1) (SYSMIS=SYSMIS) INTO ImageXX_B4_06_RCREV2.
EXECUTE.

VARIABLE LABELS ImageXX_B1_01_RCREV2 'RECODE REV2 - The headline refers to the products
benefits.'.
VARIABLE LABELS ImageXX_B1_02_RCREV2 'RECODE REV2 - The headline refers to the products
features.'.
VARIABLE LABELS ImageXX_B1_03_RCREV2 'RECODE REV2 - The headline asks a question.'.
VARIABLE LABELS ImageXX_B1_04_RCREV2 'RECODE REV2 - The headline offers a discount or
refers to a price point.'.
VARIABLE LABELS ImageXX_B1_05_RCREV2 'RECODE REV2 - The headline cites a statistic or
fact.'.
VARIABLE LABELS ImageXX_B1_06_RCREV2 'RECODE REV2 - The headline refers to product
quality or usefulness.'.
VARIABLE LABELS ImageXX_B1_07_RCREV2 'RECODE REV2 - The headline alludes to a
psychological need.'.
VARIABLE LABELS ImageXX_B1_08_RCREV2 'RECODE REV2 - The headline alludes to a social
need.'.
VARIABLE LABELS ImageXX_B1_09_RCREV2 'RECODE REV2 - The headline invokes feelings of
affection (warmth, tenderness, compassion).'.
VARIABLE LABELS ImageXX_B1_10_RCREV2 'RECODE REV2 - The headline conjures memories.'.
VARIABLE LABELS ImageXX_B1_11_RCREV2 'RECODE REV2 - The headline invokes feelings of
engagement (curiosity, interest, intrigue).'.
VARIABLE LABELS ImageXX_B1_12_RCREV2 'RECODE REV2 - The headline connects the
consumer personally to the product.'.
VARIABLE LABELS ImageXX_B1_13_RCREV2 'RECODE REV2 - The headline invokes feelings of
hopefulness (expectant, encouraged, optimistic).'.
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VARIABLE LABELS ImageXX_B1_14_RCREV2 'RECODE REV2 - The headline invokes feelings of confidence (safety, security, empowerment, pride).'.
VARIABLE LABELS ImageXX_B1_15_RCREV2 'RECODE REV2 - The headline invokes feelings of excitement (passion, amazement, enthusiasm).'.
VARIABLE LABELS ImageXX_B1_16_RCREV2 'RECODE REV2 - The headline invokes feelings of gratefulness (appreciation, thankfulness, moved).'.
VARIABLE LABELS ImageXX_B1_17_RCREV2 'RECODE REV2 - The headline invokes feelings of joyfulness (delight, happiness, pleasure).'.
VARIABLE LABELS ImageXX_B1_18_RCREV2 'RECODE REV2 - The headline invokes feelings of peacefulness (comfortable, fulfilled, satisfaction).'.
VARIABLE LABELS ImageXX_B1_19_RCREV2 'RECODE REV2 - The headline invokes feelings of confusion (baffled, ambivalence, hesitancy).'.
VARIABLE LABELS ImageXX_B1_20_RCREV2 'RECODE REV2 - The headline invokes feelings of disconnection (apathy, indifference, boredom).'.
VARIABLE LABELS ImageXX_B1_21_RCREV2 'RECODE REV2 - The headline invokes feelings of yearning (envy, jealousy, nostalgia).'.
VARIABLE LABELS ImageXX_B1_22_RCREV2 'RECODE REV2 - The headline invokes feelings of sadness (depression, disappointment, desperation).'.
VARIABLE LABELS ImageXX_B1_23_RCREV2 'RECODE REV2 - The headline invokes feelings of annoyance (aggravation, frustration, dismay).'.
VARIABLE LABELS ImageXX_B1_24_RCREV2 'RECODE REV2 - The headline invokes feelings of anger (rage, resentment, fury).'.
VARIABLE LABELS ImageXX_B1_25_RCREV2 'RECODE REV2 - The headline invokes feelings of being afraid (mistrust, fright, suspicion).'.
VARIABLE LABELS ImageXX_B1_26_RCREV2 'RECODE REV2 - The headline invokes feelings of pain (grief, devastation, loneliness).'.
VARIABLE LABELS ImageXX_B2_01_RCREV2 'RECODE REV2 - The body copy tells me what I need to know about the product to make an informed buying decision.'.
VARIABLE LABELS ImageXX_B2_02_RCREV2 'RECODE REV2 - The body copy provides reasons for purchasing the product.'.
VARIABLE LABELS ImageXX_B2_03_RCREV2 'RECODE REV2 - The body copy describes a special offer available only for a limited time.'.
VARIABLE LABELS ImageXX_B2_04_RCREV2 'RECODE REV2 - The body copy describes the products features and benefits.'.
VARIABLE LABELS ImageXX_B2_05_RCREV2 'RECODE REV2 - The body copy refers to product quality or usefulness.'.
VARIABLE LABELS ImageXX_B2_06_RCREV2 'RECODE REV2 - The body copy contains facts about the product.'.
VARIABLE LABELS ImageXX_B2_07_RCREV2 'RECODE REV2 - The body copy tells a story that reminds of past experiences or situations.'.
VARIABLE LABELS ImageXX_B2_08_RCREV2 'RECODE REV2 - After reading the body copy, I feel a level of confidence about the product.'.

VARIABLE LABELS ImageXX_B2_09_RCREV2 'RECODE REV2 - The body copy helps me feel positive about the product.'.
VARIABLE LABELS ImageXX_B2_10_RCREV2 'RECODE REV2 - The body copy makes me feel as though the product will satisfy my needs.'.
VARIABLE LABELS ImageXX_B2_11_RCREV2 'RECODE REV2 - The body copy makes me feel personally connected to the product.'.
VARIABLE LABELS ImageXX_B2_12_RCREV2 'RECODE REV2 - The body copy makes me feel that if I purchase the product, I will be a better person.'.
VARIABLE LABELS ImageXX_B3_01_RCREV2 'RECODE REV2 - The ad contains one graphic (photography or artwork) of the product.'.
VARIABLE LABELS ImageXX_B3_02_RCREV2 'RECODE REV2 - The ad contains multiple graphics (photography or artwork) of the product.'.
VARIABLE LABELS ImageXX_B3_03_RCREV2 'RECODE REV2 - The ad contains graphics (photography or artwork) that are unrelated to the product.'.
VARIABLE LABELS ImageXX_B3_04_RCREV2 'RECODE REV2 - The ad contains a celebrity spokesperson.'.
VARIABLE LABELS ImageXX_B3_05_RCREV2 'RECODE REV2 - The ad contains graphs, charts, or tables with facts or statistics about the product.'.
VARIABLE LABELS ImageXX_B3_06_RCREV2 'RECODE REV2 - The ad contains no graphic (photography or artwork) of the product, only body copy.'.
VARIABLE LABELS ImageXX_B3_07_RCREV2 'RECODE REV2 - The ad contains a male or female model using the product.'.
VARIABLE LABELS ImageXX_B4_01_RCREV2 'RECODE REV2 - The call to action verbiage creates a sense of urgency to purchase the product.'.
VARIABLE LABELS ImageXX_B4_02_RCREV2 'RECODE REV2 - The call to action tells the consumer what to do next.'.
VARIABLE LABELS ImageXX_B4_03_RCREV2 'RECODE REV2 - The call to action encourages the consumer to visit a retail sales outlet.'.
VARIABLE LABELS ImageXX_B4_04_RCREV2 'RECODE REV2 - The call to action encourages the consumer to talk to a sales representative.'.
VARIABLE LABELS ImageXX_B4_05_RCREV2 'RECODE REV2 - The call to action invites the consumer to visit the manufacturers website.'.
VARIABLE LABELS ImageXX_B4_06_RCREV2 'RECODE REV2 - It is clear who is the manufacturer/brand sponsoring the advertisement.'.
EXECUTE.

FORMATS ImageXX_B1_01_RCREV2 (F1.0).
FORMATS ImageXX_B1_02_RCREV2 (F1.0).
FORMATS ImageXX_B1_03_RCREV2 (F1.0).
FORMATS ImageXX_B1_04_RCREV2 (F1.0).
FORMATS ImageXX_B1_05_RCREV2 (F1.0).
FORMATS ImageXX_B1_06_RCREV2 (F1.0).

FORMATS ImageXX_B1_07_RCREV2 (F1.0).
FORMATS ImageXX_B1_08_RCREV2 (F1.0).
FORMATS ImageXX_B1_09_RCREV2 (F1.0).
FORMATS ImageXX_B1_10_RCREV2 (F1.0).
FORMATS ImageXX_B1_11_RCREV2 (F1.0).
FORMATS ImageXX_B1_12_RCREV2 (F1.0).
FORMATS ImageXX_B1_13_RCREV2 (F1.0).
FORMATS ImageXX_B1_14_RCREV2 (F1.0).
FORMATS ImageXX_B1_15_RCREV2 (F1.0).
FORMATS ImageXX_B1_16_RCREV2 (F1.0).
FORMATS ImageXX_B1_17_RCREV2 (F1.0).
FORMATS ImageXX_B1_18_RCREV2 (F1.0).
FORMATS ImageXX_B1_19_RCREV2 (F1.0).
FORMATS ImageXX_B1_20_RCREV2 (F1.0).
FORMATS ImageXX_B1_21_RCREV2 (F1.0).
FORMATS ImageXX_B1_22_RCREV2 (F1.0).
FORMATS ImageXX_B1_23_RCREV2 (F1.0).
FORMATS ImageXX_B1_24_RCREV2 (F1.0).
FORMATS ImageXX_B1_25_RCREV2 (F1.0).
FORMATS ImageXX_B1_26_RCREV2 (F1.0).
FORMATS ImageXX_B2_01_RCREV2 (F1.0).
FORMATS ImageXX_B2_02_RCREV2 (F1.0).
FORMATS ImageXX_B2_03_RCREV2 (F1.0).
FORMATS ImageXX_B2_04_RCREV2 (F1.0).
FORMATS ImageXX_B2_05_RCREV2 (F1.0).
FORMATS ImageXX_B2_06_RCREV2 (F1.0).
FORMATS ImageXX_B2_07_RCREV2 (F1.0).
FORMATS ImageXX_B2_08_RCREV2 (F1.0).
FORMATS ImageXX_B2_09_RCREV2 (F1.0).
FORMATS ImageXX_B2_10_RCREV2 (F1.0).
FORMATS ImageXX_B2_11_RCREV2 (F1.0).
FORMATS ImageXX_B2_12_RCREV2 (F1.0).
FORMATS ImageXX_B3_01_RCREV2 (F1.0).
FORMATS ImageXX_B3_02_RCREV2 (F1.0).
FORMATS ImageXX_B3_03_RCREV2 (F1.0).
FORMATS ImageXX_B3_04_RCREV2 (F1.0).
FORMATS ImageXX_B3_05_RCREV2 (F1.0).
FORMATS ImageXX_B3_06_RCREV2 (F1.0).
FORMATS ImageXX_B3_07_RCREV2 (F1.0).
FORMATS ImageXX_B4_01_RCREV2 (F1.0).
FORMATS ImageXX_B4_02_RCREV2 (F1.0).
FORMATS ImageXX_B4_03_RCREV2 (F1.0).

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FORMATS ImageXX_B4_04_RCREV2 (F1.0).
FORMATS ImageXX_B4_05_RCREV2 (F1.0).
FORMATS ImageXX_B4_06_RCREV2 (F1.0).
EXECUTE.

VALUE LABELS
/ImageXX_B1_01_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_02_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_03_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_04_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_05_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_06_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_07_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_08_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_09_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
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/ImageXX_B1_10_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_11_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_12_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_13_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_14_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_15_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_16_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_17_RCREV2
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1 Emotional.
VALUE LABELS
/ImageXX_B1_18_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_19_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_20_RCREV2
0 Rational

1 Emotional.
VALUE LABELS
/ImageXX_B1_21_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_22_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_23_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_24_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_25_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B1_26_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_01_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_02_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_03_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_04_RCREV2
0 Rational
1 Emotional.
VALUE LABELS

/ImageXX_B2_05_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_06_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_07_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_08_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_09_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_10_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_11_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B2_12_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B3_01_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B3_02_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B3_03_RCREV2
0 Rational

1 Emotional.
VALUE LABELS
/ImageXX_B3_04_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B3_05_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B3_06_RCREV2
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1 Emotional.
VALUE LABELS
/ImageXX_B3_07_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_01_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_02_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_03_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_04_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_05_RCREV2
0 Rational
1 Emotional.
VALUE LABELS
/ImageXX_B4_06_RCREV2
0 Rational
1 Emotional.
EXECUTE.

```
***Compute ImageXX Headline Construct Variable***

COMPUTE ImageXX_HL=SUM(ImageXX_B1_01_RCREV2 to ImageXX_B1_26_RCREV2).
EXECUTE.

***Compute ImageXX Body Copy Construct Variable***

COMPUTE ImageXX_BC=SUM(ImageXX_B2_01_RCREV2 to ImageXX_B2_12_RCREV2).
EXECUTE.

***Compute ImageXX Graphic Construct Variable***

COMPUTE ImageXX_GR=SUM(ImageXX_B3_01_RCREV2 to ImageXX_B3_07_RCREV2).
EXECUTE.

***Compute ImageXX Call to Action Construct Variable***

COMPUTE ImageXX_CA=SUM(ImageXX_B4_01_RCREV2 to ImageXX_B4_05_RCREV2).
EXECUTE.

***Compute ImageXX Sponsor Construct Variable***

COMPUTE ImageXX_SP=ImageXX_B4_06_RCREV2.
EXECUTE.

***Compute ImageXX Summated E/R Variable***

COMPUTE ImageXX_ER=SUM(ImageXX_B1_01_RCREV2, ImageXX_B1_02_RCREV2,
ImageXX_B1_03_RCREV2, ImageXX_B1_04_RCREV2, ImageXX_B1_05_RCREV2,
ImageXX_B1_06_RCREV2, ImageXX_B1_07_RCREV2, ImageXX_B1_08_RCREV2,
ImageXX_B1_09_RCREV2, ImageXX_B1_10_RCREV2, ImageXX_B1_11_RCREV2,
ImageXX_B1_12_RCREV2, ImageXX_B1_13_RCREV2, ImageXX_B1_14_RCREV2,
ImageXX_B1_15_RCREV2, ImageXX_B1_16_RCREV2, ImageXX_B1_17_RCREV2,
ImageXX_B1_18_RCREV2, ImageXX_B1_19_RCREV2, ImageXX_B1_20_RCREV2,
ImageXX_B1_21_RCREV2, ImageXX_B1_22_RCREV2, ImageXX_B1_23_RCREV2,
ImageXX_B1_24_RCREV2, ImageXX_B1_25_RCREV2, ImageXX_B1_26_RCREV2,
ImageXX_B2_01_RCREV2, ImageXX_B2_02_RCREV2, ImageXX_B2_03_RCREV2,
ImageXX_B2_04_RCREV2, ImageXX_B2_05_RCREV2, ImageXX_B2_06_RCREV2,
ImageXX_B2_07_RCREV2, ImageXX_B2_08_RCREV2, ImageXX_B2_09_RCREV2,
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ImageXX_B2_10_RCREV2, ImageXX_B2_11_RCREV2, ImageXX_B2_12_RCREV2,
ImageXX_B3_01_RCREV2, ImageXX_B3_02_RCREV2, ImageXX_B3_03_RCREV2,
ImageXX_B3_04_RCREV2, ImageXX_B3_05_RCREV2, ImageXX_B3_06_RCREV2,
ImageXX_B3_07_RCREV2, ImageXX_B4_01_RCREV2, ImageXX_B4_02_RCREV2,
ImageXX_B4_03_RCREV2, ImageXX_B4_04_RCREV2, ImageXX_B4_05_RCREV2,
ImageXX_B4_06_RCREV2).
EXECUTE.

VARIABLE LABELS ImageXX_HL ImageXX – Summated Headline Construct Variable.
VARIABLE LABELS ImageXX_BC ImageXX – Summated Body Copy Construct Variable.
VARIABLE LABELS ImageXX_GR ImageXX – Summated Graphic Construct Variable.
VARIABLE LABELS ImageXX_CA ImageXX – Summated Call to Action Construct Variable.
VARIABLE LABELS ImageXX_SP ImageXX – Summated Sponsor Construct Variable.
VARIABLE LABELS ImageXX_ER ImageXX – Summated ER Variable.
EXECUTE.

FORMATS ImageXX_HL (F8.0).
FORMATS ImageXX_BC (F8.0).
FORMATS ImageXX_GR (F8.0).
FORMATS ImageXX_CA (F8.0).
FORMATS ImageXX_SP (F8.0).
FORMATS ImageXX_ER (F8.0).
EXECUTE.

VARIABLE LEVEL ImageXX_HL (SCALE).
VARIABLE LEVEL ImageXX_BC (SCALE).
VARIABLE LEVEL ImageXX_GR (SCALE).
VARIABLE LEVEL ImageXX_CA (SCALE).
VARIABLE LEVEL ImageXX_SP (SCALE).
VARIABLE LEVEL ImageXX_ER (SCALE).
EXECUTE.

***Compute ImageXX Headline Construct E/R Variable***

COMPUTE ImageXX_HL_ER=$SYSMIS.
IF (ImageXX_HL LT 14) ImageXX_HL_ER=0.
IF (ImageXX_HL GE 14) ImageXX_HL_ER=1.
EXECUTE.
VARIABLE LABELS ImageXX_HL_ER ImageXX – HL Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX_HL_ER (F2.0).
EXECUTE.
```

```
VALUE LABELS
/ImageXX_HL_ER
0 Rational
1 Emotional.
EXECUTE.

***Compute ImageXX Sponsor Construct E/R Variable***

COMPUTE ImageXX_SP_ER=$SYSMIS.
IF (ImageXX_SP LT 1) ImageXX_SP_ER=0.
IF (ImageXX_SP GE 1) ImageXX_SP_ER=1.
EXECUTE.
VARIABLE LABELS ImageXX_SP_ER ImageXX – SP Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX_SP_ER (F2.0).
EXECUTE.
VALUE LABELS
/ImageXX_SP_ER
0 Rational
1 Emotional.
EXECUTE.

***Compute ImageXX Call to Action Construct E/R Variable***

COMPUTE ImageXX_CA_ER=$SYSMIS.
IF (ImageXX_CA LT 3) ImageXX_CA_ER=0.
IF (ImageXX_CA GE 3) ImageXX_CA_ER=1.
EXECUTE.
VARIABLE LABELS ImageXX_CA_ER ImageXX – CA Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX_CA_ER (F2.0).
EXECUTE.
VALUE LABELS
/ImageXX_CA_ER
0 Rational
1 Emotional.
EXECUTE.

***Compute ImageXX Graphic Construct E/R Variable***


COMPUTE ImageXX_GR_ER=$SYSMIS.
```

```
IF (ImageXX_GR LT 4) ImageXX_GR_ER=0.
IF (ImageXX_GR GE 4) ImageXX_GR_ER=1.
EXECUTE.
VARIABLE LABELS ImageXX_GR_ER ImageXX – GR Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX_GR_ER (F2.0).
EXECUTE.
VALUE LABELS
/ImageXX_GR_ER
0 Rational
1 Emotional.
EXECUTE.

***Compute ImageXX Body Copy Construct E/R Variable***

COMPUTE ImageXX_BC_ER=$SYSMIS.
IF (ImageXX_BC LT 7) ImageXX_BC_ER=0.
IF (ImageXX_BC GE 7) ImageXX_BC_ER=1.
EXECUTE.
VARIABLE LABELS ImageXX_BC_ER ImageXX – BC Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX_BC_ER (F2.0).
EXECUTE.
VALUE LABELS
/ImageXX_BC_ER
0 Rational
1 Emotional.
EXECUTE.

***Compute ImageXX Summated E/R Variable***

COMPUTE ImageXX=$SYSMIS.
IF (ImageXX_ER LT 25) ImageXX=0.
IF (ImageXX_ER GE 25) ImageXX=1.
EXECUTE.
VARIABLE LABELS ImageXX ImageXX – Emotional or Rational Category.
EXECUTE.
FORMATS ImageXX (F2.0).
EXECUTE.
VALUE LABELS
/ImageXX
0 Rational
```

```
1 Emotional.
EXECUTE.


FREQUENCIES VARIABLES=ImageXX_HL_ER ImageXX_SP_ER ImageXX_CA_ER ImageXX_GR_ER
ImageXX_BC_ER
  /FORMAT=NOTABLE
  /STATISTICS=MODE
  /ORDER=ANALYSIS.

* Custom Tables.
CTABLES
  /VLABELS VARIABLES=ImageXX_HL_ER ImageXX_SP_ER ImageXX_CA_ER ImageXX_GR_ER
ImageXX_BC_ER
    DISPLAY=LABEL
  /TABLE BY ImageXX_HL_ER [C][COUNT F40.0, ROWPCT.COUNT PCT40.0] + ImageXX_SP_ER
[C][COUNT F40.0,
    ROWPCT.COUNT PCT40.0] + ImageXX_CA_ER [C][COUNT F40.0, ROWPCT.COUNT PCT40.0] +
ImageXX_GR_ER
    [C][COUNT F40.0, ROWPCT.COUNT PCT40.0] + ImageXX_BC_ER [C][COUNT F40.0,
ROWPCT.COUNT PCT40.0]
  /CATEGORIES VARIABLES=ImageXX_HL_ER ImageXX_SP_ER ImageXX_CA_ER ImageXX_GR_ER
ImageXX_BC_ER
    ORDER=A KEY=VALUE EMPTY=INCLUDE.
```

APPENDIX F

Syntax used to calculate Krippendorff's alpha.

```
PRESERVE.
SET PRINTBACK = OFF.
DEFINE kalpha (judges = !charend ('/')/level = !charend('/') !default(1)/detail =
!charend('/') !default(0)/boot = !charend('/') !default(0)).
PRESERVE.
SET PRINTBACK = OFF.
SET MXLOOP = 900000000.
SET LENGTH = NONE.
SET SEED = RANDOM.
SET PRINTBACK = OFF.
MATRIX.
get dat/variables = !judges/file = */names = vn/missing = -9999999.
compute btn = !boot.
do if (!boot > 0).
  compute btn = trunc(!boot/1000)*1000.
end if.
do if (!boot > 0 and btn = 0).
  print/title = "Number of bootstraps must be at least 1000.".
end if.
compute btprob = 0.

/* FIRST WE CREATE THE DATA FILE EXCLUDING OBJECTS WITH ONLY
ONE JUDGMENT */.
/* THAT DATA FILE IS HELD IN DAT AND DAT3 */.

compute rw = 1.
loop i = 1 to nrow(dat).
  compute good = 0.
  loop j = 1 to ncol(dat).
    do if (dat(i,j) <> -9999999).
      compute good = good + 1.
    end if.
  end loop.
  do if (good > 1).
```

```
    compute dat(rw,:) = dat(i,:).
    compute rw = rw+1.
  end if.
end loop.
compute dat = dat(1:(rw-1),:).
compute nj = ncol(dat).
compute nobj = nrow(dat).
compute dat3 = dat.

/* NOW WE CREATE A SINGLE COLUMN OF DATA TO FIGURE OUT HOW
MANY */.
/* UNIQUE JUDGMENTS ARE MADE, AND WE SORT IT */.

compute m = reshape(t(dat),(nobj*nj),1).
compute allm = nobj*nj.
compute j = 0.
loop i = 1 to nrow(m).
  do if m(i,1) <> -9999999.
    compute j = j + 1.
    compute m(j,:)=m(i,:).
  end if.
end loop.
compute m = m(1:j,1).
compute mss = nrow(m).
compute mss = allm-mss.
compute mtmp = m.
compute mtmp(GRADE(m)) = m.
compute m = mtmp.
compute m2 = make(nrow(m),1,m(1,1)).
compute yass = csum((m = m2))/nrow(m).

do if (yass <> 1).
  compute des = design(m).
  compute uniq = ncol(des).
  compute coinc = make(uniq,uniq,0).
  compute delta = coinc.
  compute map = make(uniq,1,0).
  loop i = 1 to nrow(m).
    loop j = 1 to uniq.
      do if (des(i,j) = 1).
        compute map(j,1) = m(i,1).
```

```
    end if.
  end loop.
end loop.
loop i = 1 to nobj.
  loop j = 1 to nj.
    do if dat(i,j) <> -9999999.
      loop k = 1 to uniq.
        do if dat(i,j) = map(k,1).
          compute dat(i,j) = k.
          BREAK.
        end if.
      end loop.
    end if.
  end loop.
end loop.
compute datms = (dat <> -9999999).
compute mu = rsum(datms).
compute nprs = csum(mu&*(mu-1))*.5.
compute btalp = make((btn+1),1,-999).

/* THIS CONSTRUCTS THE COINCIDENCE MATRIX FROM THE MATRIX
DATA */.

  loop k = 1 to nobj.
    compute temp = make(uniq, uniq, 0).
    loop i = 1 to nj.
      loop j = 1 to nj.
        do if (dat(k,i) <> -9999999 AND dat(k,j) <> -9999999 AND i <> j).
          compute temp(dat(k,i),dat(k,j)) = temp(dat(k,i),dat(k,j)) + (1/(mu(k,1)-1)).
        end if.
      end loop.
    end loop.
    compute coinc = coinc + temp.
  end loop.
  compute q = reshape(coinc, (nrow(coinc)*ncol(coinc)), 1).
  compute q = csum(q > 0).
  compute nc = rsum(coinc).
  compute n = csum(nc).
  compute coinct = coinc.
  compute dmat = diag(coinc).
  compute nzero = csum(dmat > 0).
```

```
 compute bootm = nprs.
 compute nx = (dmat/n)&**bootm.
 compute nx=rnd(btn*csum(nx)).
 compute numone = 0.

/* THIS CONSTRUCTS THE EXPECTED MATRIX */.

 compute expect = coinc.
 loop i = 1 to uniq.
  loop j = 1 to uniq.
   do if (i = j).
    compute expect(i,j)=nc(i,1)*(nc(j,1)-1)/(n-1).
   else if (i <> j).
    compute expect(i,j)=nc(i,1)*nc(j,1)/(n-1).
   end if.
  end loop.
 end loop.

 compute tst = 25*q.
 compute tst = {tst; rnd((((nj-1)*n)/2))}.
 compute bootm2 = cmin(tst).

 loop z = 1 to (btn + 1).

/* HERE IS WHERE WE START DOING THE BOOTSTRAPPING */.
   do if (z > 1).
    compute rand = uniform(bootm2,1).
    compute numsum = 0.
    loop i = 1 to bootm2.
     loop j = 2 to indx+1.
      do if (rand(i,1) <= pmat(j,1)).
       do if (rand(i,1) >= pmat(j-1,1)).
        compute numsum = numsum + pmat(j,2).
       end if.
      end if.
     end loop.
    end loop.
    compute alpha = 1 - (numsum*(1/(expdis*bootm2))).
    do if (alpha < -1).
     compute alpha = -1.
    end if.
```

```
  do if (alpha = 1 and nzero = 1).
   compute alpha = 0.
  end if.
  do if (alpha = 1 and nzero > 1).
   compute numone = numone + 1.
  end if.
  compute btalp(z,1) = alpha.
end if.

do if (z = 1).
  do if (!level = 2).
   compute delta = make(uniq,uniq,0).
    loop i = 1 to uniq.
     loop j = i to uniq.
      do if (i <> j).
       compute delta(i,j) = (csum(nc(i:j,1))-(nc(i,1)/2)-(nc(j,1)/2))**2.
       compute delta(j,i) = delta(i,j).
      end if.
     end loop.
    end loop.
    compute v = {"Ordinal"}.
    do if (z = 1).
     compute deltat = delta.
    end if.
   end if.
  do if (!level = 1).
   compute delta = 1-ident(uniq).
   compute v = {"Nominal"}.
   compute deltat = delta.
  end if.
  do if (!level = 3).
   loop i = 1 to uniq.
    loop j = i to uniq.
     do if (i <> j).
      compute delta(i,j) = (map(i,1)-map(j,1))**2.
      compute delta(j,i) = delta(i,j).
     end if.
    end loop.
   end loop.
   compute v = {"Interval"}.
   compute deltat = delta.
```

```
    end if.
    do if (!level = 4).
     loop i = 1 to uniq.
      loop j = i to uniq.
       do if (i <> j).
        compute delta(i,j) = ((map(i,1)-map(j,1))/(map(i,1)+map(j,1)))**2.
        compute delta(j,i) = delta(i,j).
       end if.
      end loop.
     end loop.
     compute v = {"Ratio"}.
     compute deltat = delta.
    end if.
    compute num = csum(rsum(delta&*coinc)).
    compute den = csum(rsum(delta&*expect)).
    do if (den > 0).
     compute alp = 1-(num/den).
     compute btalp(1,1)=alp.
     compute expdis=csum(rsum((expect&*delta)))/n.
    end if.

/* NOW WE COMPUTE THE FUNCTION FOR BOOTSTRAPPING */.
    compute pcoinc = 2*(coinc/n)-(mdiag(diag(coinc))/n).
    compute temp = mdiag(diag(coinc))/n.
    compute pmat = make((uniq+((uniq*(uniq-1))/2)),2,0).
    compute psum = 0.
    compute ct = 1.
    loop i = 1 to uniq.
     loop j = i to uniq.
      compute psum = psum+pcoinc(j,i).
      compute pmat(ct,1)=psum.
      compute pmat(ct,2)=delta(j,i).
      compute ct=ct+1.
     end loop.
    end loop.
    compute indx = nrow(pmat).
    compute t3 = {0,0}.
    compute pmat = {t3;pmat}.
   end if.
  end loop.
  compute alpfirst = btalp(1,1).
```

```
/* NOW WE CALCULATE CI AND P(Q) FROM BOOTSTRAPPING */.
  do if (btn > 0).
    compute btalp=btalp(2:nrow(btalp),1).
/* FIRST WE CORRECT DISTRIBUTION OF NEED BE */.

    do if (nx > 0 and nzero > 1).
      compute chk1 = 0.
      compute chk2 = 0.
      loop i = 1 to nrow(btalp).
        do if (nx >= numone and btalp(i,1) = 1 and chk1 < numone).
          compute btalp(i,1) = 0.
          compute chk1 = chk1 + 1.
        end if.
        do if (nx < numone and btalp(i,1) = 1 and chk2 < nx).
          compute btalp(i,1) = 0.
          compute chk2 = chk2 + 1.
        end if.
      end loop.
    end if.

/* NOW WE SORT THE BOOTSTRAP ESTIMATES */.

    compute btalptmp = btalp.
    compute btalptmp(GRADE(btalp)) = btalp.
    compute btalp = btalptmp.



    compute btalp = btalp(1:nrow(btalp),1).
    compute mn = csum(btalp)/btn.
    compute low95 = trunc(.025*btn).
    compute high95 = trunc(.975*btn)+1.
    compute low95 = btalp(low95,1).
    compute high95 = btalp(high95,1).
    compute median = btalp(0.50*btn).
    compute q = {.9, 0; .8, 0; .7, 0; 0.67, 0; .6, 0; .5, 0}.
    loop i = 1 to 6.
      compute qcomp = (btalp < q(i,1)).
      compute qcomp = csum(qcomp)/btn.
      compute q(i,2)=qcomp.
    end loop.
```

```
  end if.
  do if (btalp(1,1) = -999).
    compute btprob = 1.
  end if.

  print/title = "Krippendorff's Alpha Reliability Estimate".
  do if (btn = 0 or btprob = 1).
    compute res = {alpfirst, nobj, nj, nprs}.
    compute lab = {"Alpha", "Units", "Obsrvrs", "Pairs"}.
  end if.
  do if (btn > 0 and btprob = 0).
    compute res = {alpfirst, low95, high95, nobj, nj, nprs}.
    compute lab = {"Alpha", "LL95%CI", "UL95%CI", "Units", "Observrs", "Pairs"}.
  end if.
  print res/title = " "/rnames = v/cnames = lab/format = F10.4.
  do if (btn > 0 and btprob = 0).
    print q/title = "Probability (q) of failure to achieve an alpha of at least
alphamin:"/clabels = "alphamin" "q"/format = F10.4.
    save btalp/outfile = */variables = alpha.
    print btn/title = "Number of bootstrap samples:".
  end if.
  print vn/title = "Judges used in these computations:"/format = a8.
  do if (!detail = 1).
    print/title =
"=================================================".

 print coinct/title = "Observed Coincidence Matrix"/format = F9.2.
    print expect/title = "Expected Coincidence Matrix"/format = F9.2.
    print deltat/title = "Delta Matrix"/format F9.2.
    compute tmap = t(map).
    print tmap/title "Rows and columns correspond to following unit values"/format =
F9.2.
  end if.
else.
  print/title = "ERROR: Input Reliability Data Matrix Exhibits No Variation.".
end if.
do if (btprob = 1).
  print/title = "A problem was encountered when bootstrapping, so these results are not
printed".
end if.
print/title = "Examine output for SPSS errors and do not interpret if any are found".
```

```
END MATRIX.
RESTORE.
!ENDDEFINE.

KALPHA judges = Costello Flynn King/level = 1/detail = 0/boot = 10000.
```

APPENDIX G

Feelings Inventory

The following are words we use when we want to express a combination of emotional states and physical sensations. This list is neither exhaustive nor definitive. It is meant as a starting place to support anyone who wishes to engage in a process of deepening self-discovery and to facilitate greater understanding and connection between people.

There are two parts to this list: feelings we may have when our needs are being met and feelings we may have when our needs are not being met.

Feelings when your needs are satisfied

AFFECTIONATE
compassionate
friendly
loving
open hearted
sympathetic
tender
warm

ENGAGED
absorbed
alert
curious
engrossed
enchanted
entranced
fascinated
interested
intrigued
involved
spellbound
stimulated

HOPEFUL
expectant
encouraged
optimistic

CONFIDENT
empowered
open
proud
safe
secure

EXCITED
amazed
animated
ardent
aroused
astonished
dazzled
eager
energetic
enthusiastic
giddy
invigorated
lively
passionate
surprised
vibrant

GRATEFUL
appreciative
moved
thankful
touched

INSPIRED
amazed
awed
wonder

JOYFUL
amused
delighted
glad
happy
jubilant
pleased
tickled

EXHILARATED
blissful
ecstatic
elated
enthralled
exuberant
radiant
rapturous
thrilled

PEACEFUL
calm
clear headed
comfortable
centered
content
equanimous
fulfilled
mellow
quiet
relaxed
relieved
satisfied
serene
still
tranquil
trusting

REFRESHED
enlivened
rejuvenated
renewed
rested
restored
revived

Feelings when your needs are not satisfied

AFRAID
apprehensive
dread
foreboding
frightened
mistrustful
panicked
petrified
scared
suspicious
terrified
wary
worried

ANNOYED
aggravated
dismayed
disgruntled
displeased
exasperated
frustrated
impatient
irritated
irked

ANGRY
enraged
furious
incensed
indignant
irate
livid
outraged
resentful

AVERSION
animosity
appalled
contempt
disgusted
dislike
hate
horrified
hostile
repulsed

CONFUSED
ambivalent
baffled
bewildered
dazed
hesitant
lost
mystified
perplexed
puzzled
torn

DISCONNECTED
alienated
aloof
apathetic
bored
cold
detached
distant
distracted
indifferent
numb
removed
uninterested
withdrawn

DISQUIET
agitated
alarmed
discombobulated
disconcerted
disturbed
perturbed
rattled
restless
shocked
startled
surprised
troubled
turbulent
turmoil
uncomfortable
uneasy
unnerved
unsettled
upset

EMBARRASSED
ashamed
chagrined
flustered
guilty
mortified
self-conscious

FATIGUE
beat
burnt out
depleted
exhausted
lethargic
listless
sleepy
tired
weary
worn out

PAIN
agony
anguished
bereaved
devastated
grief
heartbroken
hurt
lonely
miserable
regretful
remorseful

SAD
depressed
dejected
despair
despondent
disappointed
discouraged
disheartened
forlorn
gloomy
heavy hearted
hopeless
melancholy
unhappy
wretched

TENSE
anxious
cranky
distressed
distraught
edgy
fidgety
frazzled
irritable
jittery
nervous
overwhelmed
restless
stressed out

VULNERABLE
fragile
guarded
helpless
insecure
leery
reserved
sensitive
shaky

YEARNING
envious
jealous
longing
nostalgic
pining
wistful